THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

$2.00 PER YEAR. ESTABLISHED 1878. 10c. SINGLE COPY.

VOL. XVII. CLEVELAND, OHIO, JUNE 14, 1894. NO. 24

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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FINANCE COMMITTEE MEETING.

A meeting of the finance committee of the Lake Carriers' Association was held at the office of the president, Capt. James Corrigan, on Tuesday afternoon. Mr. Harvey D. Goulder, counsel for the association, who went to Washington to protest against the passage of clause 7 of the Lockwood immigration bill, made his report.

Secretary C. H. Keep, of Buffalo, attended the meeting. Though little besides routine business was transacted, reports were received from Capt. W. S. Mack, as to his work in securing reduced ore trimming charges at Marquette, and Mr. Biemel on the same mission, at Ashland.

There are three candidates for the position of supervising inspector of steamboats for the eighth district to take the place of Capt. C. H. Westcott, of Detroit. Members of the association have all along been opposed to J. H. Galwey, of Detroit, who is a candidate, and they have endorsed candidate Daly for the office, who is also a resident of Detroit.

A private dispatch was received from Washington this week saying that Secretary Carlisle has confirmed the appointment of Capt. Sidney Millen as local inspector of hulls at Detroit. Capt. Millen is a well known master and for several seasons sailed the Iron Chief.

THE MORSE CODE.

A few days ago Mr. Anthony Malone, of Garden Island, Ont., was on the steamer Traveler going down the Gallops rapids, St. Lawrence system of canals with a raft in tow. Being anxious to send a telegram to Garden Island, and not being able to get ashore to do so, he used the Morse telegraphic alphabet with the steamer's whistle and called up the operator at Cardinal. The call is "E. K." "Not knowing whether the operator heard me or not," said Mr. Malone, "I commenced to send my dispatch with the whistle, and so on my return to Garden Island found that the message was received exactly as I sent it. Mr. George P. Reid, Great Northwestern telegraph operator at Cardinal, deserves credit for interpreting the signals, as one cannot make them as evenly with a steamer's whistle as with the telegraph key."

WRECK CHART OF THE LAKES.

A commendable effort to benefit the commerce of the lakes has been put forth during the past two or three years by the U. S. Weather Bureau. The most recent departure taken in this direction is the publication of a wreck chart of the lakes with an accompanying report in pamphlet form which gives in detail the number of wrecks occurring on lakes Superior, Michigan, Huron, Erie and Ontario from December 17, 1885, to November 15, 1893. The chart shows 227 wrecks, involving a total estimated loss of $4,951,099, and 420 lives, and it is but fair to assume that a large proportion of these might have been saved had the weather conditions been known and studied in advance of the storms, as in a number of cases the vessels had been away from shelter but a short time. The following table summarizes the total loss in vessels, property and lives:

LAKE.	Vessels.	Estimated loss	Number of lives.
Superior	32	$1,290,839	62
Michigan	85	1,834,168	139
Huron	44	901,330	67
Erie	50	808,462	134
Ontario	16	116,300	18
Totals	227	$4,951,099	420

The total estimated loss for the years 1892 and 1893 was $1,995,509, of which $1,193,800 occurred from ten wrecks, causing a loss of 99 lives. Seven of these ten wrecks occurred during stormy weather conditions, of which timely warnings had been given by the Weather Bureau. Of the remaining three, two were due to fog and one to fire during a heavy southwest gale with snow.

LIGHT-HOUSE KEEPERS APPOINTED.

Secretary Carlisle has appointed Edward Ahart assistant keeper of the Buffalo breakwater light station; Alonzo R. Benjamin as assistant keeper of the light station at Grande Pointe, Au Sable, and John T. Story second assistant keeper at Detroit river light station.

TRIAL TRIP U. S. S. MINNEAPOLIS.

The report of Passed Assistant Engineer Wiletz, U.S. Navy, who represented the engineering bureau on the Minneapolis' trial trip, was received at the Navy Department on Monday. The report states that the performance of the machinery was remarkably good. On the 7th a maximum speed of 22.26 knots was maintained in deep water for an hour with an average of 128.7 revolutions per minute of all three engines; steam pressure 160 pounds at the boilers; forced draft of less than one inch air pressure; throttle half open, with the displacement of the ship, however, as less than when completely armored and equipped, and the speed was recorded by patent log, corrected from runs over a known course the day previous. An excellent feature of the engineering department is the Wheeler auxiliary surface condensers, which the Minneapolis, as well as other ships of the new navy have been fitted with, and gained such good records for efficiency. The Wheeler Condenser & Engineering Co., New York, are to be congratulated on the manufacture of superior condensers.

THE NEVADA CASE DROPPED.

The indictment in the United States District Court against James Godman, John A. Schurg and others for "casting away" the steamer Nevada in Lake Michigan has been dismissed on the motion of District Attorney Milchrist at Chicago. The steamer Nevada was lost November 14, 1890, while she was on her way from Sandusky, O., to Sheboygan, Wis., with a cargo of coal. Last fall Godman, who was her first mate, and also part owner of the vessel, and Schurg, who was the first engineer, were indicted by the federal grand jury on the charge of willfully sinking the vessel. The indictment attracted a great deal of attention at the time for the reason that but one case of the kind had occurred in the history of navigation, and for the further reason that the only punishment known to the law for the offense is death. District Attorney Milchrist said that the witnesses are scattered and so much time has elapsed since the commission of the alleged crime that it would be impossible to secure a conviction, and the case was therefore dismissed.

VESSELS RECENTLY BUILT IN THE U. S.

The records of the Bureau of Navigation show that during the first three quarters of the present fiscal year there were built in the United States and officially numbered 339 wooden sailing vessels of 24,271 tons, and 221 wooden steam vessels of 29,948 tons. During the same period 3 iron or steel sailing vessels were built of 4,749 tons, and 27 iron or steel steam vessels of 26,920 tons. These sailing vessels aggregated 342 in number, and 29,021 tons in measurement. The steam vessels aggregated 248 in number, and measured 56,869 tons. The entire number of vessels built and numbered was 590, the tonnage being 85,890. No unrigged vessels were included in the above statement.

DAMAGES AWARDED FOR PERSONAL INJURIES.

Contrary to the expectations of vesselmen, Judge Nelson of St. Paul, Minn., gave judgment on Monday in favor of Ossian Enstrom for $2,000 against the steamer City of Naples. Enstrom, who was state grain inspector, fell into the hold of the steamer and was injured. He sued for $20,000 damages. The court says that Enstrom's position as grain inspector for the state of Minnesota gave him more than a license to board the steamer. The owners of the steamer held that Enstrom had no business on board and that they were not liable for his mishap.

NEWS AROUND THE LAKES.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

Engineer John Durr has been appointed Chief of the steamer Robert Holland.

At Miller Brothers' shipyard the steamers Missoula and Yakima were in dock for new keys to their wheels; the steam yacht Catherine C for cleaning and painting bottom.

The Lake Michigan & Lake Superior Transportation Company's splendid steel steamer Manitou will start on her first trip for this season between Chicago, Mackinac and Sault Ste. Marie on Tuesday next, June 19th.

The Goodrich Transportation Company's splendid twin screw steel steamer Virginia will arrive here Sunday afternoon from Manitowoc and will commence running Monday morning at 9 o'clock on her route between Chicago and Milwaukee.

The steamer Egyptian with coal from Buffalo brought up on LaSalle street tunnel on her arrival at 3:30 o'clock Monday morning, and remained on the tunnel Monday and Tuesday, no attempt having been made to release her until the city engineer got four tugs and pulled her off Wednesday.

The fire boat Geyser, which lays in Sampson's slip in the lumber yard district is kept in excellent condition by Capt. P. Doyle and Engineer D. F. Rice and their assistants. She is supplied with 4300 feet of 3½ inch and 1000 feet of 2½ inch hose, and is ready at the call of fire at a moments notice.

Capt. Dunham was tendered a banquet by the Lake Line Agents' Association on Wednesday night as a courteous return for his successful services at Washington in aiding to prevent the erection of a center pier for a new bridge in a busy portion of the river.

The experiments in using petroleum for fuel on tugs is pronounced by the municipal officers as a complete success. Managers of tug lines, however, desire to see it further demonstrated.

A large majority of the owners of the fleet of lumber carrying schooners at this port commenced on Monday to tie up their vessels to the docks, where it is their intention to let them lay until the lumber shippers advance freight rates, as they cannot make running expenses at the present low rates. The Seamen's Union will stand by the vessels and will not allow members of the Union to ship on any vessels going for lumber at cut rates. The movement on the part of the owners will almost cut off the movement of lumber by lake to this port.

Palmer, Cook & Calbick chartered the steamer New Orleans for oats to Buffalo at 1½ cents, the steamer Isabella J. Boyce and the schooner J. J. Boyce for oats to Port Huron at 1⅛ cents. P. H. Fleming & Co. chartered the steamer City of Berlin for corn to Buffalo at 1⅜ cents. Carr & Blair the steamer D. C. Whitney and consort Wayne and the schooner Marion W. Page for corn to Buffalo at 1⅜ cents, the schooner H. D. Coffinberry for wheat to Buffalo at 1⅝ cents. Elphicke & Co. chartered the steamer Byron Whittaker and schooner S. V. R. Watson for corn to Buffalo. Capt. John Prindiville chartered the schooner Winslow for corn to Buffalo at 1⅜ cents, the steamer Norwalk corn to Buffalo at 1½ cents.

The inspection of outgoing vessels by the Marine Hospital Service and the vaccination of their crews was discontinued at midnight on Sunday. The inspection began May 8th and lasted 33 days. During that time 92 vessels of all classes were inspected and 4,694 officers and men were vaccinated. No cases of smallpox were discovered on any of the vessels. Many were compelled to be vaccinated much against their inclinations, so that a clear bill of health should be granted to their vessel, and a number have suffered very severely from the operation in consequence of exposure and having to work hard when their arms were sore and inflamed. It may have been a good precautionary measure, although there seems no reason why such discrimination should be exercised against persons leaving Chicago by vessels when thousands of non-vaccinated persons leave the city daily on railroad trains.

CLEVELAND, O.

Special Correspondence to The Marine Record.

Mr. Fred Palmer, of Cook, Calbick & Co., Chicago vessel brokers, visited port this week.

The handsome steamyacht Comanche has started on her cruise to Labrador via the St. Lawrence canals.

The steamer H. A. Tuttle docked in the Ship Owners' Dry Dock this week to have a leak stopped. She will be ready to leave for Lake Superior to-day.

The steamer Riverside will endeavor to open a passenger trade between this port and Ashtabula, a large number of the citizens of the latter port were given a complimentary excursion to Conneaut this week and they promised their hearty support to the new line.

Corrigan, McKinney & Co., who recently leased the Old River Bed blast furnaces have arranged to build a new dock with six rigs and a storage capacity for 200,000 tons of iron ore.

The Escanaba, having received a new boiler and smokestack at the Globe shipyard, has been docked at the Cleveland Dry Dock and will undergo a survey to-day. Bottom damage is anticipated.

Fairport has fueled a large number of steamers during the past week, and in fact ever since the scarcity of coal set in. W. Virginia coal is hardly good enough for domestic use, but is consumed in steamer's furnaces all right.

Capt. Fox, of the steamer F. A. Kirby, has had a couple of well patronized excursions to this port from Sandusky during the past week. As a skillful and courteous seaman there are few to excel Capt. Fox in the passenger trade.

The steamer Lakeside is running on her schedule time between this city and Port Stanley and is already building up a good trade in the passenger and package freight business. She will make excursion trips from Cleveland to Pelee Island every Sunday.

On the arrival of the North West here on Monday it was reported that she would not go through the Hay Lake channel on her next trip, as it is considered a narrow rock bound cut in which, if the large boat took a sheer, she might require a month's work at a shipyard.

The Detroit & Cleveland Steam Navigation Co. have received a supply of fuel and the steamer City of Cleveland, which was taken off the route last week will commence running again Thursday and daily thereafter. The steamer City of the Straits will make the first trip of the season to Put-in-Bay on Sunday next.

Mr. Ballin, manager of the Detroit Boat Works, visited this port on Tuesday and closed several orders for rowing, sail and yawl boats. A fleet of handsome rowboats was delivered to the Rocky River resort which will be under the superintendence of Capt. Williams, late master of the yacht Winnifred.

The steamer John Harper has been somewhat unfortunate this week for no sooner had her broken crank pin been repaired and the engine set to work than the second pin carried away and she is now back at the Globe shipyard again for further repairs. Such accidents are of course liable to take place at any time, but two in one week is rather hard in these hard times.

Capt. C. E. Benham has gone to Bay City to look after the burned steambarge, W. P. Thew, in the interests of the owners, the Marine Bank, of this city, who bought the boat in at United States marshal's sale a few months ago. The damage by fire to the Thew is estimated at $2,500, covered by insurance, but she had a part of her stone cargo aboard, and sank the following day.

Mr. Robert Logan, naval architect and surveyor, inspected the repairs made on the large steel steamer S. S. Curry, caused by her collision with the whaleback A. D. Thomson in the "Soo" river, and found that the work had been carried out in a staunch and workmanlike manner. The Curry reached Erie, Pa., on Sunday with the second largest iron ore cargo ever carried from Lake Superior quoted at 3325 gross tons.

The work on the new steel steamer building by the Cleveland Ship Building Co. to the order of the Minch estate has made wonderful progress since our last report and at the present rate of work she will soon be closed in. Capt. Wm. Gerlach, who is superintending the construction for the owners, is well pleased with every detail of construction and expects that his new steamer will be launched and completed on sharp contract time.

The little steamer W. G. Harrow, which Mr. E. R. Edson has been fitting out for the passenger, package freight, and fish trade between Rond Eau, Canada, and Cleveland, is now in commission. Capt. Joe Gorman has been placed in charge. The Harrow will leave for Rond Eau every evening at 4 o'clock, arriving there at 9 p. m., and leaving Rond Eau about 6 o'clock the following morning, will reach Cleveland at noon. A saloon has been fitted in her forward below decks, which can in a few minutes be turned into staterooms with roomy berths for the accommodation of a limited number of passengers, who may make the round trip without going ashore, if they so desire.

Capt. Edward Dahlke, of the tug J. R. Worswick was on hand Saturday last to rescue an elderly lady who, in a state of bewilderment, had taken off her best garment deposited it carefully on the ground and plunged into the muddy Cuyahoga, fancying, in her demented condition, that she needed just such a rest. Capt. Dahlke has been on the river for twenty-six years, during which time he has been instrumental in rescuing and saving a total of fifty-eight lives. Relative to heroic acts of life saving at this as well as at other ports there ought to be some more approachable means of recognizing merit than the present system of red tapeism. Several men out of this port are eminently entitled to be presented with the medal issued by the treasury department for saving life and this encouragement is justly their due, but big bodies move slowly and even a quarter of a century is not too long a time to elapse ere bravery becomes recognized by the big guns who "sit at home at ease."

The steel tug, J. R. Sprankle, the last of the three tugs built at the Globe shipyards for Messrs. L. P. and J. A. Smith, was launched Saturday afternoon. It was a very successful launch and the tug gives promise of being a good boat. She has three water-tight bulk-heads and water compartments forward and aft. She is 70 feet long by 16 feet beam and 9 feet depth and is furnished with a passenger license to enable her to carry any small parties which may want to go out on trips of inspection or other business. A number of trips contemplated by municipal officials have been seriously hindered of late by the absence of any tugs in port privileged to carry passengers. The Sprankle's displacement, when she went into the water yesterday, was thirty-five tons without her boilers. Her other machinery is nearly all in and she will be put to work by the Cleveland Tug Co. in a few days. The firm was represented at the launch by J. A. Smith and J. R. Oldham, who superintended her construction.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

The North West shipped an orchestra here this week and will make lively times tuning up in the rivers, making landings, as well as frightening fish when on the broad bosom of the lakes.

The vessel brokerage firm of Galvin, Clark & Boland is being reconstructed. Capt. Clark and Mr. John C. Fitzpatrick, last year agent for the C. & B. Line at this port, comprising the new firm.

It is reported that the steamer N. K. Fairbank will be sold by the United States marshal on Friday to satisfy a claim of the Ship Owners' Dry Dock Co., of Cleveland.

Mr. Edward P. Gaskin, of the Union Dry Dock, visited Cleveland this week on business.

The Canadian excursion steamer Tymon, chartered to run between here and Crystal Beach, Canada, this season, has been heavily fined by the government inspectors for not having adequate life preservers, fire buckets and other equipment for the safety of passengers on board.

The harbor and canal improvement committee of the Buffalo Merchants' Exchange appointed four delegates to attend a meeting of New York state commercial associations at Albany on Friday, to consider the canal amendments to the constitution now before the constitutional convention and other matters in relation thereto, on the invitation of the New York Produce Exchange. The delegates are Messrs. Robert R. Hefford, George Clinton, M. M. Drake and P. V. Carroll. The canal committee of the convention has issued a notice stating that it will hear parties interested in the canals of the state on June 20th at Albany.

Howard H. Baker, the well known ship chandler, has been appointed postmaster of Buffalo. Every person I meet says it is a most excellent appointment and I know THE RECORD will fully endorse this view. From Duluth to Ogdensburg, how much further I don't know, Howard H. Baker has gained the respect and esteem of all with whom he has been brought into contact. Mr. Baker is a Buffalo man all through and a good Democrat, at the same time he is a successful business man, but he is not nor ever has he been a politician. Those duties, services and citizen-like affairs which he has from time to time been called upon to attend to have been faithfully and generally successfully carried out. In his marine connection, from the highest to the lowest, dealing with large or small orders, his fairness and courtesy has won for him the best wishes of his patrons and his new honors are well placed. Also may I note that his executive and business ability is equal to the important office to which he has been appointed by the President.

DETROIT, MICH.

Special Correspondence to The Marine Record.

The new steamer Adelia Shores has been towed from the new Clark dry dock to the Riverside Iron Works, Samuel F. Hodge & Co., to have her boiler and machinery placed.

There are now seventeen dredges engaged between Lakes Erie and Huron on the 20-foot channel project. One of the dredges at Grosse Pointe removed 3,152 cubic yards of earth in eleven hours of actual working time and it is considered that this is the largest day's work yet done by any dredge in the lakes.

The Iron tug Protector purchased by Capt. James Reid, in New York last summer arrived here Tuesday. She was inspected by the supervising inspector of this district, and granted a license. The Protector was built in Wilmington, Del., by Harlan & Hollingsworth, for the underwriters, for use as a fire tug and wrecker and last year towed the Columbus caravels from New York

to Chicago. She is 135 feet in length. She has great power and bunker capacity and will tow rafts from from Georgian Bay to Bay City during the season.

Owners of the smaller class of pleasure craft have organized as the Corinthian Mosquito fleet, all the boats being within 20-foot measurement. They will race every Saturday afternoon. The members are Walter Cooke, Brady Wendell, Charles Frazer, Walter Dupont, Dr. Sheerer, Albert Schmidt, Richard Kerchner, O. J. Mulford, Ben. Jacobs, Dr. A. D. Carrier, Ernest Joy, Wm. Wolff, Messrs. Robinson, Malcomson, Bronson and Utter.

A somewhat novel labor case occurred here last week when the Canadian steam barge Owen arrived at the Detroit, Grand Haven & Milwaukee dock with 150 cords of stave-bolts from Chatham, and consigned beyond Detroit. A gang of five men who came over on the barge proceeded to transfer the cargo to freight cars standing on the dock. As the men were aliens and clearly violating the contract labor law, Immigration Inspector C. C. McGlogan had them arrested and taken before Commissioner Graves. After a preliminary examination of Capt. Edward Crowe, of the barge, the commissioner adjourned the case owing to the absence of the district attorney. The men were released upon their promise to appear then, but were warned by the commissioner not to come to the dock with the cargo pending the decision of the attorney. Later Inspector McGlogan visited another Canadian steam barge, the Ireland, at the foot of Dequindre street, where he found a similar condition of affairs, and had the men summoned to appear before the commissioner.

A dispatch from Buffalo generally printed in lake papers says that the Northwest will not take the Hay Lake channel in St. Mary's river on her second trip. It reads that "General Manager Gordon regards this channel, on which the government spent $3,000,000, as a failure, because it is too narrow and dangerous." Gen. O. M. Poe, when shown the dispatch, by the Free Press expressed some surprise and doubted somewhat whether Mr. Gordon said what was attributed to him. "The Hay Lake channel," said he, "is, in the narrowest place, 100 feet wider than the narrowest place in the old channel. It is 300 feet wide, and the old one is only 200 feet. Besides this it is nearly a straight line, while the old channel has changes of direction in places where the water is very swift. At East Neebish there is a change of direction in the very rapids, while the Hay Lake channel has no such places. It is five feet deeper than the old channel and is eleven miles shorter. It is also a mistake about $3,000,000 being spent. The entire amount appropriated up to date is $2,015,000, and it has not all been expended,"

OGDENSBURG, N. Y.

Special Correspondence to The Marine Record.

The car ferry steamer Armstrong is being rebuilt at the St. Lawrence Marine Railway.

The steamer Samuel Marshal which arrived with 43,000 bushels of corn last week was the first vessel to bring a cargo from Washburn to this port.

An inquest on the body of a man named Champagne, lost from the steamer Ocean, when in collision with the barge Kent, near Sisters Light, June 7th, was held Saturday, Chas. A. Kellogg appearing for the people and George R. Malby appeared for Capt. Malcolmson, of the Ocean; after hearing the testimony of the crews of both vessels the jury adjourned till Friday, June 15. The Ogdensburg Coal & Towing Company, owners of the barge Kent, are endeavoring to raise her, and the Donnelly Wrecking Co., of Kingston, are at work upon the propeller Ocean.

DULUTH, MINN.

Special Correspondence to The Marine Record.

Already the effect of the coal strike is seen in the lessening business of the ore docks, and the shipments of this week will be curtailed largely. This will stop the hauling of cars to the docks, and in the case of some of the Mesaba mines, will stop, as well, the mining of ore, there being no stock piles and the docks not having capacity for storage. It is very probable that had the coal supply at all points of accumulation given out earlier the strike would have ended earlier than now, and the vessel and ore men at the head of the lake make no qualifications to the statements that the coal operators have known all the time when the strike would end.

It is reported here that the Carnegie Steel Co. has bought an interest in the Oliver mine on the Mesaba, and the fact that arrangements are being made to ship 5,000 tons a day, adds confirmation to the report. The mine is an enormous property, far greater than had ever been believed until very complete explorations were made a short time ago. These have just been completed and it is found that the ore body of the mine has a depth of not less than 400 feet. As the body is 600 to 700 feet wide and extends half a mile in length, its ore deposit is almost beyond comprehension.

The flour mills at the head of the lakes made the greatest run in their history last week, turning out 95,358 barrels, and 7,348 barrels more than the best previous record. Shipments during the week amounted to 345,661 barrels, against 231,939 barrels in the week before, and 185,307 barrels in the corresponding week of last year. Stocks on hand are 235,500 barrels. It is feared that there will be a wheat famine at the mills before the new crop begins to move, and very little wheat will go down the lakes till fall at least.

The largest cargo of iron ore that ever went from a Lake Superior iron region was loaded at Ashland, Wis., on Monday by the steamer Merida, which cleared from that port with 3,718 net tons. Last season the steamer Curry took the broom with a cargo of 3,620 tons, but she has now to surrender the record to the Merida.

During H. W. Oliver's recent visit here he made preliminary arrangements for an extension of 532 feet to the West Superior dock of the Youghiogheny & Lehigh Coal Co., and for the building of a 400 foot dock for the same company in Duluth. Both works will probably be undertaken this year.

An item is going the rounds to the effect that the Canadian Sault canal will be open next month. Your correspondent was at the "Soo" last week, and ventures the prediction that it will not be in readiness enough earlier than 1895 to help or hurt anyone.

The following interesting statement of the loss of timber annually upon Lake Superior comes from Ashland: Over 20,000,000 feet of logs are lying on the beach at Bark Point off Sand Island, on the Bayfield peninsula. Many of the logs have been there for a long time, the bark being worn off the ends and the marks being washed away by the waves. The accumulation of drift logs and timber at the head of the lakes amounts to $250,000 in value every year. Chequamegon bay and this beach catch nearly all of the drift timber of Lake Superior owing to the projection of the Bayfield peninsula in the heavy northwesters, and these storms have been known to bring logs clear across the lake.

The big North West has come and gone, and to say that she met a royal reception and more than equaled expectations, is drawing it very mildly. Your correspondent came up from the Sault on her, and has been called a "North West" crank ever since. There must have been 15,000 people on the docks at Duluth to welcome the ship when she arrived, and they were all as enthusiastic as even president Hill, manager Gordon or builder Pankhurst could desire. In this connection I want to say a word as to the way in which assistant manager F. P. Gordon treated the newspaper boys on the way from the Sault to Duluth. There were nine of them, three each from St. Paul, Duluth and Minneapolis, and they were all shown every courtesy and given every opportunity to examine the ship, even to the minutest detail. Your correspondent was made sort of "mentor, philosopher and friend" for the party, and if they were not filled with ideas that they never had before as to the Great Lakes, the traffic and especially the North West and her owners and builders, it was not his fault. There is no use, of course, in saying anything here about the ship, as she has been fully described in THE RECORD, but her work on Lake Superior was perfect. Her clean work in the water was particularly noticeable. There is no question that the North West will capture the travel of the lakes, or as much of it as she can take care of. Duluth is very proud of the ship, and just before landing the passengers drew up and passed the following set of resolutions:

"The passengers and guests on this, the maiden voyage of the North West, the queen of passenger steamers and the triumph of modern marine architecture and skill, join together in congratulations and best wishes to the Northern Steamship Co. and its officials, to the builders and to the officers and crew of the steamer over the auspicious inauguration of the boat's regular service. We unite in declaring that the North West is not only all that she has been described as being, the finest and most complete modern passenger steamer, but that she is more—she is a palace of delight and a model of comfort, the perfection of all that is known in the art of making travel by water pleasant.

"We unite in the belief that the lake trip as given by the North West deserves to be placed at the head of all routes of travel in America for comfort or recreation.

"We desire to thank the managers of the line and the officers for the great success of their first trip, and to General Manager John Gordon, Assistant Manager F. P. Gordon, to Capt. Campau and to the other efficient officers, and to the crew, we especially extend our sincere regards and heartfelt appreciation for their kind and thoughtful attention.

"The trip is an epoch creating one and we are more than fortunate in participating in it."

The Columbus left for her route on Lake Michigan on Monday. She has been, as I have before said, much improved even from the handsome and fast vessel of last year, and if she don't show a clean pair of heels to anything on Lake Michigan those who have seen her will be much disappointed. All her interior fittings are ahead of last year. In fact, she has had a complete overhauling and all improvements suggested by the hard work of last season are put in with no stinted hand. She showed her capacity for money making by carrying two excursions of about 4,000 people each Saturday and Sunday. It wouldn't be beyond the pale of possibilities if she made some startlingly good time between here and the Sault.

ITEMS FROM THE LOG BOOK.

The steamer Owen Sound will distribute lighthouse supplies for the Dominion government this year.

It is reported on good authority that the New American Line has mortgaged the sixteen vessels of their fleet for six million dollars, to improve the service.

J. S. Sullivan, Toledo, purchased at sheriff's sale on Tuesday the half interest in the tug A. Andrews, Jr., owned by Charles Aubbard fsr $2,6000.

The largest catch of fish ever made at St. Joseph, Mich. at one lift was made last Saturday by the tug Tramp. She lifted over 6,000 pounds of trout and white fish.

Vesselmen who navigate the Maumee are complaining that the light on the Lake Shore bridge of Toledo is not of the right kind. They say that the green lights have not sufficient illuminating power to be discerned.

The Goodrich Transportation Co., purchased at Muskegon, Mich. this week, a harbor frontage of 795 feet in the heart of the city. The property unimproved, cost $8,000. The company will build docks and warehouses and store coal at that point for its steamers.

The steamers Visitor and Leroy Brooks, of Put-in-Bay, which were seized by the Canadian authorities for alleged violations of the Dominion marine laws, have been released under bond, and arrived at Put-in-Bay Monday.

The contractors for the Canadian Sault canal are now engaged in clearing-up work. The masonry is entirely complete, and the seven lock gates are already on the ground. It is expected that water will be let into the canal about July 10, when the gates will be placed in position.

The passenger steamer Riverside is scheduled to commence her regular trips between Ashtabula and Cleveland, Thursday morning. The Riverside will run regularly between Ashtabula and Cleveland, each day except on Wednesdays and Sundays, when she will run excursions out of Harbor, O.

The steamship Selwyn Eddy took out a cargo of 121,000 bus. of No. 1 Northern wheat from Duluth, on Monday morning from the Superior Terminal elevators. This beats the best previous record, also held by the Eddy, by 6,000 bus. It would take over 10,000 acres of last year's crop to make up this cargo.

Capt. Frank Nixon, of the schooner C. C. Barnes, has filed his report of the damage done the schooner in the great storm of May 8 on Lake Michigan. He says the vessel's anchors were dragging and went on some old piers, and to save the crew he slipped the anchor and went ashore. He estimates the damage to the Barnes at $4,500.

The wreck of the steamer Waldo A. Avery, which burned with a cargo of corn in the Straits last December, was raisee this week and towed to Mackinaw City. Considering that the fire burned two days and that ice floes were driven over the wreck, it is in remarkably good shape.

Major Sears, Corps of Engineers U. S. Army, of Duluth, and Inspector McDonald put a force of men at work last week to repair the government breakwater at Ashland, which was so badly damaged by the storm of last month. There is $10,000 now at the disposal of the officials for repairs.

The steamer Pierrepont salved all the movable articles from the propeller Ocean, sunk near Rockport. The men lost were William Throne and M. Champague, of Montreal. Champague's body was found in the forecastle, but Throne's could not be secured. The Ocean insured for $15,000, it is said, will be abandoned to the underwriters. The baggage of the passengers in trunks is still in the cabins, and will be safe until the wreckers can raise the steamer, which may take place in a week or so.

In the Dominion House of Commons last week the Sabbath observance bill being under consideration, the clause providing for closing the canals was adopted. It provides that the canals shall be closed on Sundays between the hours of 6 a. m. and 5 p. m., providing that in case of urgent necessity the clause may be suspended by order in council for a term not exceeding four weeks. Efforts to have the Sault Ste. Marie canal exempted from the clause were unsuccessful.

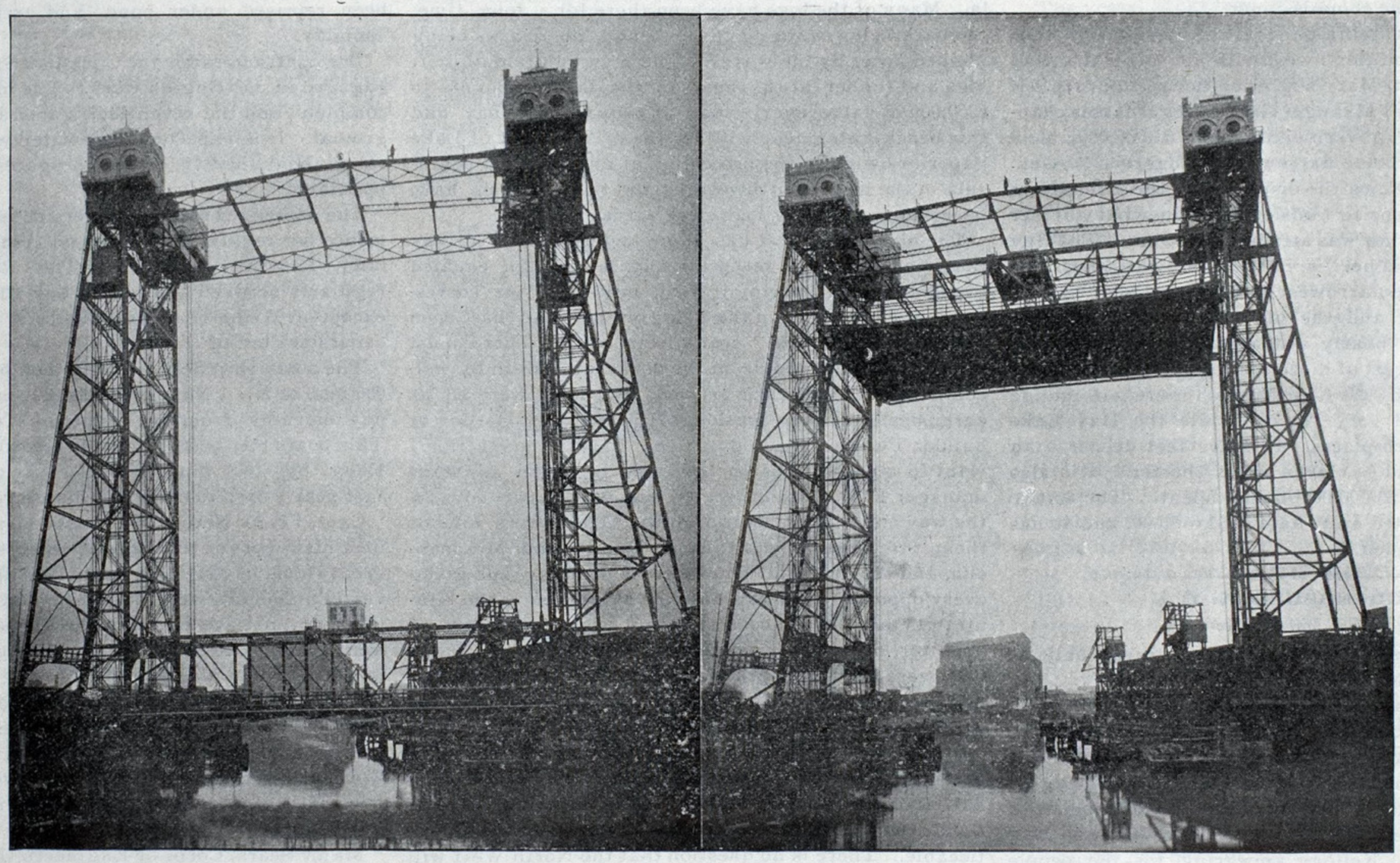
There will probably be a passenger rate war between the whaleback Christopher Columbus and the Goodrich line excursion boats between Chicago and Milwaukee. The Goodrich management has announced that the day rate made by Chris. will be met and that they will hereafter run Sunday excursions, a thing they have never done before. Rivalry of the keenest sort is likly to set in, to the great enjoyment of excursionists, who may yet be offered free transportation and refreshments for making the trip. There is no satisfaction however for the vessel people in such a cut-throat mode of doing business and the companies ought to get together so as to make proper rates.

CHICAGO RIVER BRIDGE.

(ILLUSTRATED.)

An effort has been made for years to establish a system of bridges at lake ports that would do away with the necessity for having large turntables built on abutments occupying from a half to one-third the navigable space of the waterway and forming permanent obstructions to traffic. J. H. L. Waddell, bridge engineer, Kansas City, Mo., designed the structure shown in the accompanying illustration and the Pittsburg Bridge Co., of Pittsburg, Pa., carried out the constructive work. This new bridge is an innovation and is the first attempt to bridge a stream without obstructing traffic in any way.

Each tower is 196 feet above the river level and 177 feet 7 inches above the street level. At the top of each tower there are four sheaves each 12 feet in diameter. Over these pass thirty-two ½" steel cables, which are attached to the top chords of the bridge on one side and to counterbalancing weights on the other. The bridge (lift section) is 122 feet long in the clear and weighs 300 tons, consequently the counterbalances, which are of iron, are of the same weight. At the upper and lower extremities of the tower are placed hydraulic buffers. The buffers are cast cylinders of 14" diameter, filled with glycerine and fitted with a 3½" piston rod, against which the lift sections strike in raising and lowering. As the piston is forced into the cylinder the rapidity of the flow of the liquid varies as it is pressed into a separate reservoir made for that purpose. The flow is graduated to suit the rapidity of the approach of the bridge by means of tapering plugs. The lift section is 64 feet wide, over all, of which 12 feet on either side are for foot passage, leaving a 40-foot roadway to accommodate the street traffic, the hoist being 155 feet in the clear.



LIFT-BRIDGE AT S. HALSTED ST., CHICAGO.

The time required to lift the bridge the full height at full speed is 45 seconds, or at the average rate of 210 feet per minute. The contract called for 85 feet in 50 seconds. Two men, an engineer and a bridge tender, will be the working force, and a code of electric signals is arranged for communication. So delicately is the great draw balanced that the power of one man can raise it should emergency require. The bridge cost $200,000 and is the first of its kind. Its advantages include economy of first cost and operation; has all the advantages of a fixed bridge, including granite floor paving, if required, is exceedingly stiff, rapid of movement and free from danger of collision.

FROM THE GREAT LAKES TO THE SEA.

Maritime Register, New York.

Newspapers are giving very interesting accounts of the trip of the Norwegian steamship Craggs from Bergen to Chicago, and of the great profits made by this voyage. The whole affair is described in the most glowing language, and one would suppose that a great and most prosperous trade is about to spring up directly between Chicago and European ports. All things seem possible and Chicago may take a large part of the Western transatlantic trade away from New York and Boston and Philadelphia, but to the business man who has to do with these trades, it does not look as if this diversion of trade would come within the life of the present generation. There will undoubtedly be a direct trade from the Great Lakes to Europe, for the comparatively few shipments already made prove its feasibility. But that it will reach proportions great enough to alarm the coast ports is not probable. One means of preventing it, as far as New York is concerned, is the improvement of the Erie canal. That canal can be made large enough to accommodate vessels of size as large as any employed between the Great Lakes and the seas on the St. Lawrence route. The great drawbacks to any large or extended direct vessel trade between Chicago and the ocean will be the limitation upon the size of the vessels made by the canals used and the comparative shortness of the season. It is an absolute law of transportation that prevails over all restrictions and arbitrary obstacles that the vessel will go as far as waterways, artificial and natural will permit toward the center of the distributing and producing districts. This may seem to give the Great Lakes and Chicago an advantage which they will secure eventually. But the limitations, as before mentioned, place this advantage of direct water routes upon a limited scale, and one that leaves the bulk of the trade to the cities nearer the ocean.

WEATHER FORECASTING.

Prof. Moore, late forecast official of the Weather Bureau, stationed at Milwaukee, has, after a competitive examination, been selected by Secretary Morton to take charge of the Chicago office. A close check is to be kept on the observers and signal display-men at upper lake ports, and masters of vessels will be requested to cooperate in the lake work. Blanks will be furnished each captain on which he will promptly report to the Chicago office whenever he encounters a storm without signals flying at contiguous stations, and also whenever he notices signals flying for an unusual length of time at any display station without high winds occurring. This will enable Prof. Moore, by reference to a file of his orders, to determine whether erroneous signals are due to his own error of judgment or to the negligence of a subordinate in executing his orders. Whatever information besides storm warnings which the official in charge feels can be used to advantage by mariners, will be promptly telegraphed to display-men at different ports and by them distributed to the vessels in port.

It is well known that sailors are able to get more information from the movements of a single barometer relative to coming weather changes than a college professor, and all mariners are invited daily to visit the Chicago weather office and inspect the charts now made showing the barometer movement, which records the changes in air pressure throughout the whole country. With a word or two of explanation, they will readily comprehend that now they are able to note the movements of over 100 barometers, instead of the one on their vessel, and their deductions as to probable wind directions and force will be based on more substantial grounds than heretofore.

In the case of severe storms which can be foreseen with a fair degree of certainty, the department will not be satisfied to have observers simply run up the danger flag when ordered to do so, but the officials will be expected to be actively at work notifying interested parties, and when warnings are issued from a Chicago center in advance of a storm, observers and display-men on the upper lakes will be required promptly to render a report by mail as to what was accomplished by them in giving the warnings to persons who could make use of the information. We understand, however, that Prof. Moore's prognostications will not apply to Lakes Erie and Ontario.

Mistakes in judgments and errors in scientific deductions will occur, no matter who the official may be that issues the warnings, but the public is entitled to a degree of accuracy equaling 80 per cent., and Secretary Morton insists that they shall have it.

Rigid tests which have been made by his direction show that while the most competent officials of the bureau can equal that figure in forecasting, others cannot, and doubtless no one hereafter will be allowed to forecast for large or important districts who cannot equal the standard. At the same time, it is claimed, the press and the public should be willing to give the forecaster a leeway of 20 per cent. for error. In other words, they should expect one prediction out of five to be wrong and four to be right. This is as close as science can come to-day in attaining accuracy, but by making merit the only basis for advancement among the workers, as Secretary Morton has done, a corps of students and investigators will continually be at work whom one can reasonably hope shall further reveal the secret forces of nature in their application to meteorological problems, and whose discoveries will naturally add to the 80 per cent. of forecasting accuracy of the present day.

THE NICARAGUA CANAL.

It has been decided by the House committee on interstate and foreign commerce to report to the House a bill for the acquirement or the Nicaragua canal by the government and for carrying on the work to completion. Senator Morgan's measure will be adopted with some changes which have been advised in the committee. Representations that British influences are at work in Nicaragua against the United States have had the effect of hastening the work.

WHEN the famous old war vessel Kearsarge came to such an ignominious fate on Roncador Reef several weeks ago it was not destined that her name should disappear from the list of vessels in this country, but that her name should be perpetuated, not in a modern floating agency of destruction, but in the more peaceful annals of the merchant marine of the Great Lakes. The big steel freight steamer Kearsarge, which was launched last week at South Chicago will serve as a memorial of the victorious old battleship, although she will not carry the tools of destruction, but transport the products of the Northwest through the chain of lakes to Eastern points.

U. S. S. OLYMPIA.

(ILLUSTRATED.)

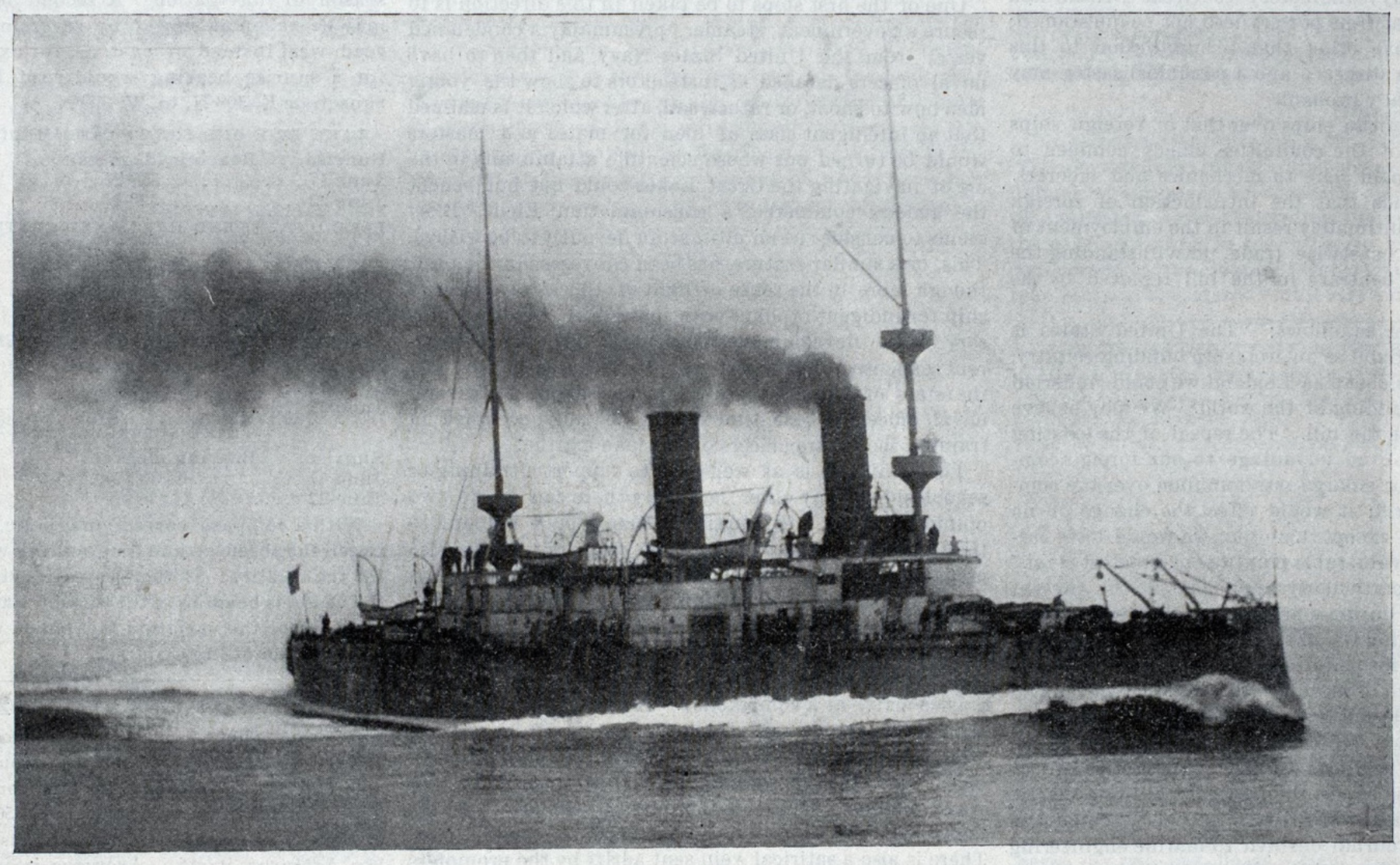
A more than general interest is being felt relative to the ships of our new navy, and, as a majority of our readers may not have an opportunity to personally visit, sight or inspect any of the new cruisers, we have been permitted, through the courtesy of the American Society of Naval Engineers, to publish the cut and particulars of the cruiser and her engines.

The Olympia is a steel, twin screw protected cruiser, of 5,500 tons displacement, built and engined by the Union Iron Works, San Francisco, Cal., at a contract price of $1,796,000, with a bonus of $50,000 for every quarter knot in excess of the guaranteed speed of twenty knots per hour for four consecutive hours' steaming.

The hull is constructed of mild open hearth steel. The outside keel plate is 9-16 inch thick reduced at the ends to ½ inch; the inner keel plate and outside plating is ½ inch thick, the former being reduced to 7-16 inch at ends. The sheer strake is 1 inch thick reduced to ¾ inch at ends, and the inner bottom plating is 5-16 inch metal. Her frames are spaced 4 feet apart over the limits of the double bottom and 6 inches closer forward and aft of this space.

A brief summary of the principal hull data as furnished by Assistant Engineer R. E. Carney, U. S. Navy, is as follows: Length over all, 344 feet 0¾ inches; between perpendiculars, 340 feet; beam, 53 feet 0⅝ inches; mean draft, 21 feet 6½ inches. The protective deck is 2 inches thick on the flat, and 4¾ inches on the incline in the wake of the engines, being reduced to 3 inches outside that limit. Over the engine room hatch to protect the tops of the main cylinders a glacis plate 4 inches thick is worked in, inclined at an angle of 30°. The battery consists of four 8-inch breech-loading rifles mounted in pairs in two barbettes; ten 5-inch rapid-fire rifles in broadside on the main deck; four 6 pounders on the superstructure deck, under the bridges, and ten 6 pounders on the berth deck. In addition there are to be six Howell torpedo tubes, one at the bow, one at the stern and two on each broadside.

The official trial of the Olympia developed a speed of 21.686 knots per hour in favorable weather conditions, thus insuring the builders a handsome bonus for speed efficiency and the highest encomiums of the service for completed workmanship in every department.



U. S. S. "OLYMPIA," BUILT BY THE UNION IRON WORKS, SAN FRANCISCO.

TO IMPROVE THE ERIE CANAL.

The project of holding a canal convention in Albany, N. Y., previous to the meeting of the Constitutional convention, is assuming definite form. The New York Chamber of Commerce and Produce Exchange have taken the matter up. Invitations have been sent out to all the boards of trade in the state, asking them to send delegates to Albany to confer on the best means of improving and preserving the canal and increasing its sphere of usefulness. The invitation further requests that such delegates shall reach Albany a day ahead of the date set in order to confer with such parties interested in canal matters as may meet there to participate in a general discussion of canal affairs.

The meeting promises to be a determined effort of the commercial interests of the state to secure proper canal legislation. All that remains is for the friends of the canal to see that its needs are properly presented. The Buffalo board of trade will send delegates and every effort will be made to make the gathering large enough to impress the state Constitutional convention with the importance of making the canal adequate to compete with the railroads in the grain trade. Arguments in favor of the canal will be heard by the convention committee on canals June 20.

APPRECIATIVE.

For a good, clean and enterprising marine journal THE MARINE RECORD of Cleveland is in the lead. It gives the news around the lakes in a comprehensive and impartial manner and has weekly articles on subjects ably written and worth the price of the paper if all other matter were left out.—Detroit *Tribune*, June 9.

A CARGO HANDLING RECORD.

A record for discharging iron ore was made at Ashtabula Harbor, O., on Monday that shows the best time ever made in unloading ore at that or any other port on the chain of lakes. The twenty-first anniversary of George B. Raser's service as manager of the Pennsylvania company's docks at the Harbor was made the occasion for the spurt. The steamer German went under the hoists with 2,275 tons of ore. The steamer Onoko followed with a cargo of 2,275 tons. The actual working time in handling the 4,734 tons of ore was twelve hours and fifteen minutes. Eight machines were used on each boat, thus making nearly 592 tons for each machine. The best record ever made before at any port was about 500 tons per single machine in twelve working hours.

THE MANCHESTER SHIP CANAL.

Sir John Harwood, vice-chairman of the Manchester Canal Co., submitted to the municipal authorities a statement of the canal's financial condition which caused a sensation. He gave figures tending to show that the canal deficit at the end of 1894 will be £146,862. Unless drastic action is taken the Manchester corporation will have to find the interest on the debenture bonds in 1896, which will mean an increase of taxes of 1s. 7½d. in the pound. The canal will require on outlay of about $50,000 a year for dredging. More capital will also be wanted as a result of lack of economy in the construction of the canal.

NEW LAKE TONNAGE.

For the week ending June 2, 1894, the Bureau of Navgation assigned official numbers to only four new lake built vessels: Sail—Grampian, 844 tons, Pt. Huron, built at Bay City, Mich. Steam—Bon Ami, 227 tons, Grand Haven, built at Saugatuck, Mich.; Angler, 7 tons, Cincinnati, O., built at Chicago, and the Shenandoah, 2,252 tons, Pt. Huron, built at Bay City, Mich.

BUFFALO COAL FIGURES.

The following statistics of the coal trade of Buffalo was compiled by Mr. William Thurstone, the secretary of the Merchants' Exchange:

Coal movement at Buffalo to June 1, this year, with comparisons of previous years: Receipts and shipments by railroad not reported by request. Receipts by lake this season none. Shipments by lake from opening of navigation to June 1, 341,744 net tons as compared with 541,479 tons in 1893 and 404,370 tons in 1892. The receipts by canal this season to June 1, nothing. Net tons as compared with 4,560 tons in 1893 and 143 tons in 1892. The shipments by canal this season to June 1, 461 net tons as compared with 6,296 tons in 1893 and 673 tons in 1892. Lake freights from opening of navigation to June 1, 25@45 cents to Chicago, 25@40 cents to Milwaukee, 25@15 cents to Duluth and Lake Superior ports, 40 cents to Green Bay, 30@35 cents to Racine, 35 cents to Sheboygan and Saginaw and 25 cents to Toledo, Detroit and Bay City. A year since on May 31, the rates were 60 cents to Chicago, 55 cents to Milwaukee, 30 cents to Duluth and Lake Superior ports, 55 cents to Green Bay, 30 cents to Toledo and Detroit, 35 cents to Bay City, 60 cents to Racine and 40 cents to Saginaw. The shipments by lake thus far this season show a decrease of 199,137 net tons as compared with 1893, and a decrease of 52,626 net tons as compared with 1892.

The distribution of coal by lake from the opening of navigation to June 1, was as follows: To Chicago 152,035 tons; to Milwaukee 81,434 tons; to Duluth 27,815 tons; to West Superior 34,050 tons; to Gladstone 60,100 tons; to Toledo 19,390 tons; to Racine 6,350 tons; to Kenosha 800 tons; to Green Bay 1,150 tons; to Detroit 400 tons; to Bay City 650 tons; to Superior 3,700 tons; to Port Huron 2,040 tons; to Alpena 200 tons; to Manitowoc 2,080 tons; to Benton Harbor 600 tons; to Sand Beach 600 tons; to Sault Ste. Marie 1,900 tons; to Ludington 2,150 tons; to Cheboygan 2,190 tons; to Owen Sound 650 tons; to St. Clair 250 tons and to Hamilton (Canada) 380 tons.

EXPANSION OF METAL GIRDERS.

A writer on strains in girders, referring to the amount of movement of iron girders due to expansion and contraction under extreme variations of temperature, observes that for iron and steel the coefficient or rate of expansion is nearly 1 inch for 100 degrees F. of heat for every 100 feet in length. Thus a girder 60 feet in length will expand 6-10 inch for 100 degrees increase of temperature and contract the same amount for 100 degrees decrease of temperature; or a girder 75 feet long will vary 75-100 inch, or ¾ inch for a variation of 100. He says: "In order to provide for all contingencies it is the general practice to allow for a vibration of 100 degrees F., or a movement equal to 1½ inch for every 100 feet in length." A girder 60 feet long will therefore require to have an allowance for movement in the moving end equal to 9-10 inch, or 1 inch, the other end being fixed. It is only necessary to put the rollers under one end of the girder, so that the movement of the girder may be at that end only.

THE MARINE RECORD

ESTABLISHED 1878.

PUBLISHED EVERY THURSDAY, AT 144 SUPERIOR ST., (LEADER BUILDING), CLEVELAND, O.

IRVING B. SMITH, CAPT. JOHN SWAINSON, } . . . PROPRIETORS

BRANCH OFFICE:

CHICAGO, ILL., ... 179 LaSalle Ave.

THOMAS WILLIAMS, Associate Editor.

SUBSCRIPTION.

One copy, one year, postage paid, . . . $2 00
One copy, one year, to foreign countries, . . $3 00
Invariably in advance.

ADVERTISING.

Rates given on application.

Entered at Cleveland Post Office as Second-class Mail Matter.

CLEVELAND, O., JUNE 14, 1894.

THE FITHIAN FREE SHIP BILL.

The minority report of the House committee on merchant marine and fisheries condemns in unmeasured terms the Fithian Ship bill granting free admission to American registry of ships built in foreign countries. It starts out by saying: "That the adoption of this course would prove highly satisfactory to Great Britain and other important maritime powers need not be questioned; that it would prove other than a humiliation to this Republic, a certain disgrace and a possible disaster, may be accepted as equally probable."

The cost of American ships over that of foreign ships is, in the opinion of the committee, chiefly confined to the higher wages paid here to mechanics and laborers. The report contends that the introduction of foreign built ships would ultimately result in the employment of such ships in our coastwise trade, notwithstanding the provisions to the contrary in the bill reported by the majority.

The report closes as follows: "The United States is only second to England as an iron ship building country. If we had labor as cheap as England we could underbid her for the ship building of the world. We may believe that and yet oppose the bill. The repeal of the existing law would prove of no advantage to our foreign commerce; it would not enlarge our dominion over the commerce of the world; it would effect the change of no material condition except this—that we would have surrendered our most vulnerable point to our greatest rival."

This report is particularly applicable at the present time, as the recent business proposition submitted by the Cramps Ship Building Co. to the British Secretary of the Admiralty, asking for permission to make tenders for the construction of two or more of the proposed new naval vessels, has brought out an expression of opinion from the technical papers published on the other side which amply bears out the views taken by a minority of the committee in whose hands the free ship bill was placed.

In this connection, *The Steamship*, Leith, Scotland, a valuable monthly journal devoted to marine engineering and ship building, after hauling Mr. Cramp over the coals for downright cheek in daring to offer a decided business proposition to the British Admiralty, characterizes the communication as a piece of bounce, not worth treating seriously, etc., and follows up the gist of the argument in the following strain:

"We believe that in every sense of the word Mr. Cramp is a "bluffer." Cheapness is no recommendation in war vessels. Mr. Cramp is free to go to France, Germany, Russia or any other great power and build as many war vessels for them as he can get orders for; but it is a matter of vital and paramount importance that the British Admiralty will distribute the work as fairly as possible among the ship builders of this country, so that in times of emergency we may have at home all the resources for adding to our navy. Free trade has proved a great boon to this country, but the argument does not apply to the building of vessels of war any more than it would apply to hiring an army of foreigners for the defense of our country. We have plenty of men ready and willing to do the work here, and it would not be just to them to send so much work away. We do not believe that Mr. Cramp could build either as good or as cheap as in this country. If he can, why does he not try to compete in the open market of the world for merchant shipping? To be plain, we have no hesitation in saying that but for the back-stair influence and the force of powerful interests not a single ton of shipping would be built in America. In the open market they are simply nowhere."

Now, if the foregoing, which in all fairness may be taken as the consensus of opinion among the marine fraternity of Britain, marks the spirit in which our maritime progression is viewed, there is great pertinence in the minority report of the House committee headed by Mr. Fithian. Nor would there be any relevancy in announcing that Graf Teleky has been staying in New York with the object of purchasing, or ordering to be built, several steamers on behalf of a Russian syndicate which intends to establish a line of boats to run between Vladivostock and some Pacific ports in connection with the Trans-Siberian railway, unless, indeed, it was thought desirable to pick up foreign built tramp steamers for the trade, as without the "undue influences" nothing could be built in the United States for that or any other route.

That a candid business proposition offered in all fairness by a reputable American firm should be pronounced bluff and bluster by citizens of the mother country argues that they are not yet aware that we are out of our swaddling clothes in a relative class of the rank of nations. The assertion that not a single ton of shipping would be built in the United States except through the use of unfair influences shows a spirit of ignorant vindictiveness almost past understanding, while it only further incites our people to a superiority of skill and workmanship in ship construction which in a short time will no doubt arouse the choler of British marine journalists to a point of paralytic imbecility.

NAVAL SCHOOL SHIP.

The naval officer in charge of the branch Hydrographic Office at Chicago is desirous of establishing a schoolship at that port for training boys up to the requirements of lake service. The hydrographer considers that the lakes have been woefully neglected thus far in the matter and he would endeavor to raise the status of the sailing community to a higher technical plane, all of which sounds very laudable without being quite practicable.

One of the first steps to be taken in this direction is to secure a government steamer, presumably a condemned vessel from the United States Navy, and then to have naval officers detailed as instructors to show the young idea how to shoot, or rather, sail, after which it is claimed that an intelligent class of men for mates and masters would be turned out whose scientific attainments in the art of navigating the Great Lakes could not but benefit the general commerce, a consummation Lieut. Blow seems to consider as an ultimatum devoutly to be wished. This, or a similar feature, has been canvassed in the past, though more in the sense or light of a local reformatory ship for indigent orphan boys instead of a federal nursery for the development of talent, as, although the current expenses of the ship would of course be borne by the state of Illinois, there would be a detail for several naval officers whose time would be fully occupied in training the future officers of the lake marine.

That Chicago is as well able to support a training or school ship as any other large city there can be no two opinions. That such an institution would redound to the technical benefit of the marine fraternity we are also prepared to admit, but, relative to the success of the plan outlined we are not so sanguine as perhaps we ought to be. The plea is advanced that at present the only way to learn seamanship (pilotage) is to go on a boat at the lowset position and work up. Just so, and we know of no better way to arrive at a competency. Again, we are told that the school ship would teach the use of oil in storms, which alone would save many lives and much property each year. To this we may say that the use of oil for wave quelling purposes is thoroughly well known on the lakes and has been for a quarter of a century past. There is also a satirical vein sent adrift by the promoters of the school ship scheme giving the impression that horrible incompetency exists among the officers of the lake marine, and that educated as well as capable officers have become an immediate necessity for a continuance of lake commerce. Well! If such is the reputed status of the officers at the present time we are unaware of it and the direct steps to take to obviate such a condition would be to appeal to the supervising inspector of steam vessels, as well as the commissioner of navigation, so that the examination for original licenses may be made more inclusive and a proper jurisdiction be wielded over the sail tonnage of the country.

Furthermore, there seems to be a continual desire evinced to speak ill or derogatory of the lake marine relative to the technical skill and ability of the fraternity as a class, to which THE RECORD takes a decided objection. Naval officers have no right or reason to criticise the ability of men who are daily accomplishing what few, if any, of their own class dare even attempt to perform. Masters in the lake service are the peers of any set of pilots in the world and while quite amenable to hearing, reading and taking on board due instructions, reliable information and advanced technical studies they will bear with but poor grace even a mild form of mud slinging over their reputations.

VISIBLE SUPPLY OF GRAIN.

The stocks of grain in Chicago elevators last Saturday evening were 19,199,000 bushels of wheat, 3,047,000 bushels of corn, 174,000 bushels of oats, and 129,000 bushels of rye. Total, 22,548,000 bushels of all kinds of grain, against 23,701,000 bushels a year ago. For the same date the Secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 58,211,000 bushels of wheat, 7,514,000 bushels of corn, 2,764,000 bushels of oats, 205,000 bushels of rye, and 87,000 bushels of barley. These figures are smaller than the corresponding ones a week ago by 1,202,000 in wheat and larger by 10,000 in corn. The visible supply of wheat for the corresponding week a year ago decreased 2,418,000 bushels.

EXPIRATION OF STEAMBOAT LICENSES.

List of steamers whose inspection certificates expired during the month of June, 1894, in Chicago district:

Munson	June 6	Flora	June 16
Pearl	" 6	Maud C.	" 20
Quito	" 6	M. G. Hansler	" 20
Alcoyne	" 6	McCormick	" 20
Viking	" 6	Huron	" 24
Louisiana	" 8	Volanta	" 30
City of New York	" 8	Chicago	" 23
Leo	" 8	D. P. Hall	" 23
R. E. Schuck	" 10	Thistle	" 23
Dolly	" 20	Belle of Calumet	" 27
Edith K.	" 20	Saint Louis	" 27
Chas. Stein	" 20	Manitou	" 27
Belle	" 13	Omega	" 27
Wan Bun	" 13	M. Brand	" 29
Romeo	" 15	Iris	" 29
Juliet	" 15	Lapstreak	" 29
Pallas	" 16	Maggie Duncan	" 30

AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation: A second bearing of the Sun may be taken at sunset by reversing the bearings to read west instead of east, as, for example, N. E. by E. for a sunrise bearing would read N. W. by W. for a sunset, or E. 30° N. to W. 30° N.

LAKE ERIE AND S. END LAKE MICHIGAN. LAT. 42° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 17	E. 32° N.	NE. by E. ⅛ E.
June 22	E. 32° N.	NE. by E. ⅛ E.

LAKE ONT., S. END HURON AND CENTER LAKE MICHIGAN LAT. 44° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 17	E. 33° N.	NE. by E. ⅛ E.
June 22	E. 33° N.	NE. by E. ⅛ E.

N. END LAKES HURON AND MICH. LAT. 46° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 17	E. 34° N.	NE. by E.
June 22	E. 34° N.	NE. by E.

LAKE SUPERIOR. LAT. 48° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 17	E. 36° N.	NE. ⅞ E.
June 22	E. 36° N.	NE. ⅞ E.

With a compass correct magnetic, the difference between the observed and true bearing will be the variation for the locality. If there is any deviation on the course the vessel is heading at the time of taking the bearing the result after the variation is applied will be the amount of deviation on that course.

FOR JUNE STAR-GAZERS.

Looking about eight or nine o'clock in the evening toward the east, we see not far from the meridian the splendid star Arcturus in the constellation Bootes. This constellation contains over 50 stars, of which, however, but eight are more or less conspicuous, notably Arcturus itself. Arcturus is one of those stars of which astronomers have detected proper motion. It is traveling through space at the rate of 54 miles a second at least, though its distance from us is so enormous as to render the relative position of Arcturus to the other stars scarcely perceptible. It has a decidedly yellowish tinge, which distinguishes it from most of the other first-magnitude stars. The constellation Virgo has passed the meridian, but still being high up is very favorable for observation, and presents a particularly fine appearance on account of the planet Saturn's sojourning within its boundary lines, not far from the first-magnitude star Spica. Near the eastern horizon we see the two constellations Cygnus and Aquila on the point of rising. Toward the southeast the fiery-red star Antares may be seen, the principal star of the beautiful summer constellation Scorpio, to be seen at greater advantage during the next two months. In the northeast a star has risen which by its luster cannot but at once attract the gazer's attention—the brilliant star Vega in the constellation Lyra. Between it and Arcturus we again behold Corona Borealis and Hercules. Ursa Major is overhead.

In the southwest the fine constellation Leo, so conspicuous by its sickle-like shape, is bending toward the western horizon. Connecting its brightest star, Regulus, with Spica and the latter with Arcturus, we have a large right triangle. Between Bootes and Ursa Major we see a number of stars scattered about which in modern times received the name of Canes Venatici or the Hunting Dogs. The stars in this constellation are so small and widely scattered that they scarcely engage our attention. with the exception of one, which, in honor of the unfortunate Charles I of England, received the

name of Cor Caroli. Between it and Denebola, in Leo, the beautiful group Coma Berenices cannot fail to attract the attention of the star-gazer. Canis Minor, Auriga, Perseus, and Gemini, which during the winter nights engaged our attention so pleasantly, have disappeared below the western horizon, indicating by their departure from the evening sky the rapid approach of summer.

LAKE FREIGHTS.

Notwithstanding the scarcity of fuel and the number of boats tied up during the past few weeks, iron ore rates have not moved a notch either way and 80 cents from the head of Lake Superior, with 65 and 50 cents from Marquette and Escanaba, respectively, still rule, with the latter quotation perhaps a trifle weaker on account of a rush of tonnage to Lake Erie ports seeking fuel. The probability of an early settlement of the miners' strike is accountable for a soft coal charter at 40 cents to Milwaukee, although all parties are holding off until the miners are actually at work. Fuel is offered at $3.25 Cleveland, and $3.80 Fairport and Lorain.

The Buffalo coal rates have been fairly active and are now quoted at 45 cents; Chicago, 40 cents, Milwaukee Straits and St. Clair River points, 35 cents, and the head of Lake Superior, 25 cents. Canal freights weak at 3 cents wheat; corn, 2¾ cents, and oats, 2⅜ to 2½ cents. Lumber, $1.75 to New York and $1.35 to Albany.

The Chicago grain freights are again demoralized, for, although a strong effort was made through the week to get 1½ cents on corn, the rate is back to 1¼ cents, with a few small consignments at 1⅜ cents; Kingston, 2½ cents.

Reports from Duluth show that charters on grain have been made during the week at 2¼ cents, also at 2⅜ cents per bushel Duluth to Buffalo, although owners hold for 2½ cents. There is but little inquiry for tonnage and not much offered. The nominal rate is 2⅜ cents, although it is said that charters made at that were effected with special conditions. The week's shipments amounted to about 570,000 bushels. The rate for Kingston business is nominally 3½ cents. The rate on lumber is strong at $1.75 per thousand. Some vessels are holding out for $2, and it is thought will get that figure if the situation remains firm. No soft coal is being received and only a comparatively small amount of hard coal. In lumber nothing has been chartered at Ashland this week for less than $2 to Tonawanda and Chicago, and the freight market is firm at that. Fuel is held at $3.50 per ton. Milwaukee to Buffalo, 1¼ cents, and Chicago to Port Huron paid 1⅛ cents on oats. Toledo to Buffalo, 1 cent on wheat. Oswego coal to Chicago, 75 cents, and Duluth 50 cents. Detroit wheat to Buffalo, 1½ cents. Washburn corn to Buffalo, 2¼ cents.

CAPTAIN GODMAN'S STATEMENT.

That two men have been unjustly and maliciously accused of a great crime is now evident. November 14, 1890, the large steamer Nevada sprung a leak off Two River Point and sunk in spite of heroic efforts to save her. Capt. James P. Godman and engineer Shurg, of the Nevada, were charged with purposely sinking the vessel. To purposely abandon a vessel is a capital crime, and this charge was preferred against Godman and Shurg.

Capt. Godman called on the Chicago correspondent of THE MARINE RECORD a day or two ago and made the following statement of the case:

"Up to the present time I have deferred making a statement of my side of the case. I have been waiting for the courts to exonerate me before making any public plea for myself. The legal authorities have now said to the world that I am innocent. The steamer Nevada was said to have been cast away for the purpose of defrauding insurance companies.

"In September, 1890, I was asked to take command of the Nevada. I took charge of the boat at Milwaukee, shipped a crew and proceeded to Escanaba for iron ore. I knew no one belonging to the boat. The owners of the steamer lived at Sandusky, and I did not have one dollar's interest in her. I made one trip on the boat and resigned in favor of Capt. Landgraf, one of the owners. Landgraf made one trip, when I again assumed command at the urgent request of Landgraf. The night of Nov. 13, 1800, the boat was northeast of Two River Point, and on sounding the pumps it was found that she had sprung a bad leak. The water gained rapidly, getting beyond the control of the pumps. The boat was headed for the west shore and the assistance of the propeller Manchester asked for and obtained. The Manchester tried to tow the Nevada to shoal water, but had to abandon the effort and proceeded to Manitowoc for further assistance, when the captain returned with a tug nothing but wreckage was found floating round, as the Nevada had foundered.

"At the time the boat was lost I did not know that she was insured, but I afterward learned that the entire insurance money had been made payable to outside parties who had claims against the boat, and the owners were financially ruined by the loss. Under such circumstances what object could the owners have had in conspiring to scuttle the steamer? It is hardly reasonable to think that the underwriters would pay $45,000 insurance on the boat if they had the least suspicion that she was willfully sunk?

"The statement of a Chicago paper that District Attorney Milchrist could not get the witnesses together and for that reason dismissed the case is false."

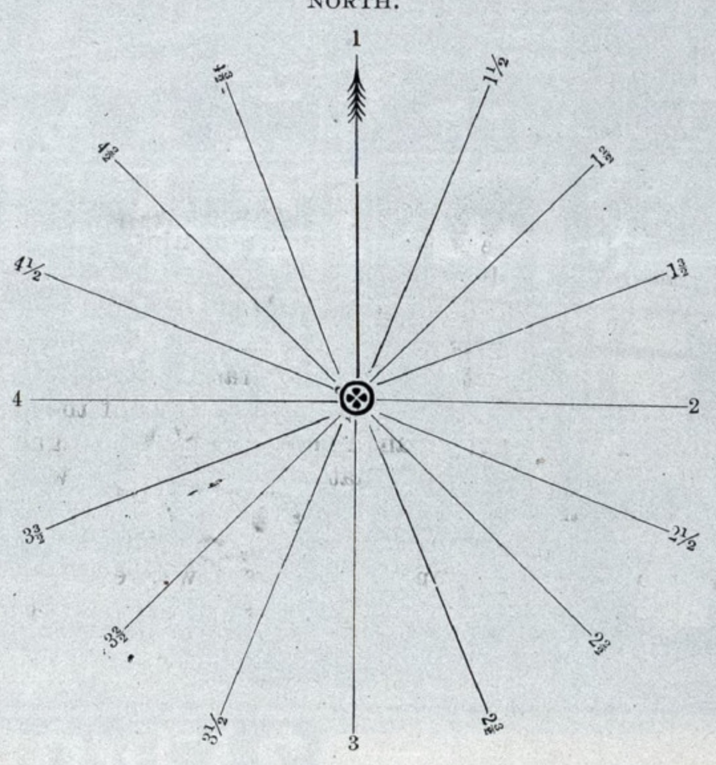
"Mr. Milchrist told me that there was no cause of action whatever against me and said he would dismiss the case. This sensational and baseless charge has cast a shadow on my heretofore spotless reputation. It has also injured the social standing of my innocent family, and the damage done me is almost irreparable. My past life will stand the closest investigation. I have spent my life on the water. I was an officer in the British navy, serving under Admiral Sir Charles Napier in the Crimean war. As yet Mr. Shurg and myself have been unable to locate the persons who first preferred these charges, but we have not dropped the matter by any means. We have our suspicions as to who these parties are, and we will not stop until they are found."

WICKMAN'S CODE OF MARINE FOG SIGNALS.

The accompanying line drawing illustrates the proposed "Wickman's Code of Marine Fog Signals," to be used for denoting the course of a vessel under way during fog or thick weather when vessels are not in sight of each other.

This subject has been dealt with by marine experts in all maritime countries, and there are several methods which approximate the Wickman code, though, perhaps, all are rather more complicated in the repetition and multiplicity of sounds to denote angle or direction.

In the Wickman's code, which, by the way, is endorsed by the Treasury Department, Secretary of the Navy, Light-House Board and Supervising Inspector of Steamboats, the figures 1, 2, 3 and 4 according to the diagram represent long blasts; $\frac{1}{2}$, $\frac{2}{2}$, $\frac{3}{2}$ represent short blasts, and it is a characteristic of the code that the long blasts are always used first, it being of course clearly understood that notwithstanding the course signals heard, the "Rule of the Road" must be implicitly followed. The code is further simplified by a provision for the steamer giving one short blast for each vessel in tow ten seconds after the course signal is given.



Concisely, the inventor of the code, Mr. Wm. Wickman, 720 North Oakley avenue, Chicago, Ill., states:

"The signals are comprised of long and short blasts of the steam whistle, arranged so as to at once indicate the course steered and so simple that it will recommend itself to all practical steamboat men at a glance.

"The long blasts represent the four principal points of the compass, and the short blasts the intermediate points.

"For years steamboat men have felt the necessity of a uniform code of signals, a code that will enable two vessels to inform each other of the courses they are steering, when the weather is so thick that colored lights can not be distinguished. Sail vessels are required by law to sound one blast of the fog horn when on the starboard tack, two blasts when on the port tack, and three blasts ween the wind is abaft the beam, but somehow Congress has never enacted laws that would lessen the peril to steam vessels navigating in foggy weather.

"Fog is the greatest enemy vessels have to contend with. Two steamers meeting in thick weather have no means of determining the direction the other is heading and such ignorance is very often the cause of collision. By using the proposed marine fog signals, steam vessels would know each other's course, and the danger of collision would be greatly lessened, and at the same time, sail vessels would not be ignorant of the steamer's course, as such ignorance is also very often the cause of collision."

This system is, as may easily be seen, a course indicating one, and not by any means a helm signal. Its purpose is to tell a vessel not in sight how another is steering, or over what arc of the compass her course is set, the present or future action of such vessel or vessels to be controlled entirely by the "Rules of the Road" applicable in each specific case.

The inventor of this code ignorantly submitted this system to the proprietors of a journal bearing a nearly similar title to THE MARINE RECORD under the belief that the papers were one and the same, not knowing of any marine authority on the lakes other than THE RECORD. Our contemporary, assuming an unearned importance, tells the inventor of the "course indicating signals" as follows: "We are sorry that we cannot urge their adoption by the government, as they do not do away with the most serious disadvantage in fog signals, viz., that of conflict with passing signals." Passing signals, be it understood, are not touched upon in the code. These our readers will perceive are, as we have said, "course signals," and as such are probably the most simple and distinct ever announced to the maritime world. Of course it is not to be expected that an iron mining review would recognize the difference between helm and course signals, yet it is refreshing to note that it could not urge the government to adopt the method proposed for course signals as a helm signal code.

However the foregoing may be, the Secretary of the Navy seems to have found some merit in the new system, as he writes to the inventor as follows:

NAVY DEPARTMENT,
WASHINGTON, D. C., August 8, 1893.

SIR:—In relation to the proposed system of marine fog signals, I have to inform you that the system immediately commends itself as being so practicable and so much of an improvement over the present system, that its adoption would appear desirable. The department therefore recommends you to bring the matter to the notice of Congress, in whom alone lies the power of ordering its general adoption. Very respectfully,

H. A. HERBERT,
Secretary of the Navy.

We have an assurance from Mr. Wickman that many lake masters have investigated the code and for course indicating signals in thick weather give it their unqualified approval, notwithstanding the current belief that the passing signals in fog hitherto used, but recently condemned by the Board of Supervising Inspectors for lake use, are considered eminently safe and useful.

STAGE OF WATER AT ST. MARY'S FALLS CANAL.

DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

Depth of water at the St. Mary's Falls Canal for the week ending June 14, 1894:

June	7	8 a. m.,	15	feet	0	inches.	8 p. m.,	15	feet	0 inches.
"	8	"	15	"	0	"	"	14	"	11 "
"	9	"	15	"	0	"	"	14	"	11 "
"	10	"	14	"	10	"	"	15	"	0 "
"	11	"	14	"	11	"	"	15	"	0 "
"	12	"	15	"	0	"	"	15	"	0 "
"	13	"	14	"	11	"	"	15	"	0 "
"	14	"	14	"	10	"	"			

MARITIME LAW.

THAMES TOWBOAT CO. v. CENTRAL R. CO. OF NEW JERSEY.

District Court, D. Connecticut. April 7, 1894.

COLLISION—TUGS ON CROSSING COURSES. Tugs on crossing courses at night saw each other a quarter of a mile apart. Each whistled, and shortly afterwards ported her helm. About a minute later danger signals were exchanged, and each reversed until collision. The one having the other on her starboard hand was encumbered by two car floats. Held, that it was her plain duty, on discovering the other, to immediately reverse in order to keep out of the way (rules 19 and 21, §4233, Rev. St.), and that the special circumstance rule (No. 24) had no application. The Emma Kate Ross, 41 Fed. 826, and 46 Fed. 872, applied.

WEEKS et al. v. WILSON TRANSIT CO.

Circuit Court of Appeals, Sixth Circuit. February 19, 1894.

1. COLLISION—INEVITABLE ACCIDENT—BREAKING OF TILLER ROPE—BURDEN OF PROOF. When a collision results from the breaking of a steamer's tiller rope, the burden is upon her to rebut the presumption of negligence, either by showing the cause which broke the rope, and that the result of that cause was inevitable, or by showing all the possible causes which might have produced the break, and then showing that the result of each one of them could not have been avoided.

2. SAME—EVIDENCE. A collision having resulted from the breaking of a steamer's tiller rope, it was shown in her behalf that the rope was of charcoal iron wire, of suitable size, of the usual kind, and externally sound; and that it had been bought of a reputable outfitter, and used less than two seasons, while the minimum life of such a rope is about three years; and that it had been inspected a few hours before the accident. Witnesses who saw the broken ends of the wires testified that there were no indications of defects. The steering gear was worked by steam engines capable of putting severe strain on the rope, but the evidence showed that the wheel was not suddenly handled. Held, that the collision was due to inevitable accident, and not to the steamer's fault. 52 Fed. 985, affirmed.

Appeal from the District Court of the United States for the Eastern District of Michigan.

This was a libel by Charles H. Weeks and others against the steamer Olympia, of which the Wilson Transit Co., is claimant, to recover damages for a collision. The court below dismissed the libel (52 Fed. 985), and the libelants appeal.

TRIAL TRIP OF A STEAM LIFEBOAT.

The new steam hydraulic lifeboat which is to be added to the fleet of the Royal National Lifeboat Institution has been given her official trials. On the initial trial there was a smart breeze, and a heavy sea was running. Four runs were at first made, two with and two against the tide, her speed being 6¾ knots, her mean draft is but 3 feet 3 inches and the displacement 30 tons. The anticipated rate of 8½ knots was realized in the subsequent four runs. The machinery worked most satisfactorily. The boiler is in a separate compartment, which during the trial was worked as a closed stokehold for forced draught. The air pressure varied between 1½ inches and 2 inches during the trial. The boiler, by Messrs. Penn, London, is of the water-tube type. Unlike other designs it has two steam chests on the top as well as two water drums below. The former are 21 inches diameter and the latter 9 inches, and the steam-generating tubes pass diagonally from the right water drum to the left steam chest. The fire is under this arch of tubes. There are tubes on the extreme wings, which act as downcomers in the process of circulation. The tubes are all of steel, and are one inch diameter. Another feature is that the steam-pipe on its way to the engine passes through the uptake of the boiler for the purpose of drying the steam, which is greatly desiderated in some other boilers. The boiler is 7 feet 6 inches long, and the fire grate 5 feet long. The steam of 115 lb. pressure ran the compound engines at 360 revolutions. Coupled to each end of the shaft of this engine is a turbine 2 feet 6 inches diameter. Each turbine draws water through a rectangular orifice in the bottom of the boat, and forces it in a jet through a 12-inch hole aft. These two jets propel the vessel on the same principle as a rocket is forced upward. With two corresponding jets the vessel is driven astern, while on either broadside is a jet which yesterday drove the vessel laterally first from Port Victoria and afterwards from Sheerness Pier. It is intended to keep the vessel clear of any wreck alongside which she may be lying. The two turbines suffice for all three motions. The entire weight of the machinery is 8 tons, a result only possible with water-tube boilers. Out in the open off Sheerness the seaworthiness of the boat was severely tested, and the buoyancy trials showed that she could be heeled over 105 degrees and easily righted herself. Using one jet to go astern and without the help of the rudder the boat turned a complete circle in 5 minutes, 5 seconds, while steaming five knots. With both jets going ahead and the rudder starboarded the circle was made in one minute 27 seconds, and with the rudder ported in one minute 26 seconds.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN.

MANISTEE LIGHT STATION. MANISTEE (REAR) LIGHT.—Notice is hereby given that, on or about June 18, 1894, a coast light of the fifth order, showing fixed white, varied by a red flash every 45 seconds, will be re-established in the light-house on the northerly side of the mouth of the Manistee River, E. side of Lake Michigan, Michigan.

The focal plane of the light will be 45 feet above the mean level of the lake, and the light may be seen in clear weather, the observer's eye 15 feet above the lake, 14 miles. The light will be obscured when bearing S. 68° E. (ESE.) at points less than 800 feet from the outer end of the N. pier.

The light will be shown from a black lantern surmounting a square low tower rising from the lakeward gable end of a one-and-one-half-story white frame dwelling.

The approximate geographical position of the light, as taken from Chart No. 62 (Lake Michigan Coast Chart No. 9) of the U. S. Survey of the Northern and Northwestern Lakes is:

Latitude, North, 44° 15′ (00″.)

Longitude, West, 86° 20′ (19″.)

MANISTEE PIERHEAD (FRONT) LIGHT.—On the same date a fixed red light will be established near the outer end of the N. pier, at the entrance of the Manistee river, 2,022 feet N. 68° W. (WNW.) from the above-described light, and with it will form a range for approaching the harbor. (The axis of the N. pier extends into the lake in an NW. by W. ¾ W. direction.)

The light will be shown from a lantern in the inclosed glazed end of a conduit extending shoreward 290 feet to the new fog-signal house of the N. pier. The focal plane of the light will be 23½ feet above the mean level of the lake.

On the same date the steam fog signal will be moved, without change of characteristics, from the S. pier to the new house on the N. pier. The signal house is a corrugated iron structure painted brown. An elevated walk, 12 feet above the pier, on trestles 16 feet apart, extends shoreward from the rear of the fog-signal house, a distance of 900 feet.

MANISTEE PIERHEAD LIGHTS, S. PIER.—On the same date the two fixed red lights on the S. pier will be discontinued.

Bearings are true and distances are in statute miles.

By order of the Light-House Board.

JAMES A. GREER,
Rear-Admiral U. S. Navy, Chairman.

Office of the Light-House Board, Washington, D. C.,

Notice is hereby given that the 1st class can buoy, marking the Reef off Racine, Wisconsin, has been reset.

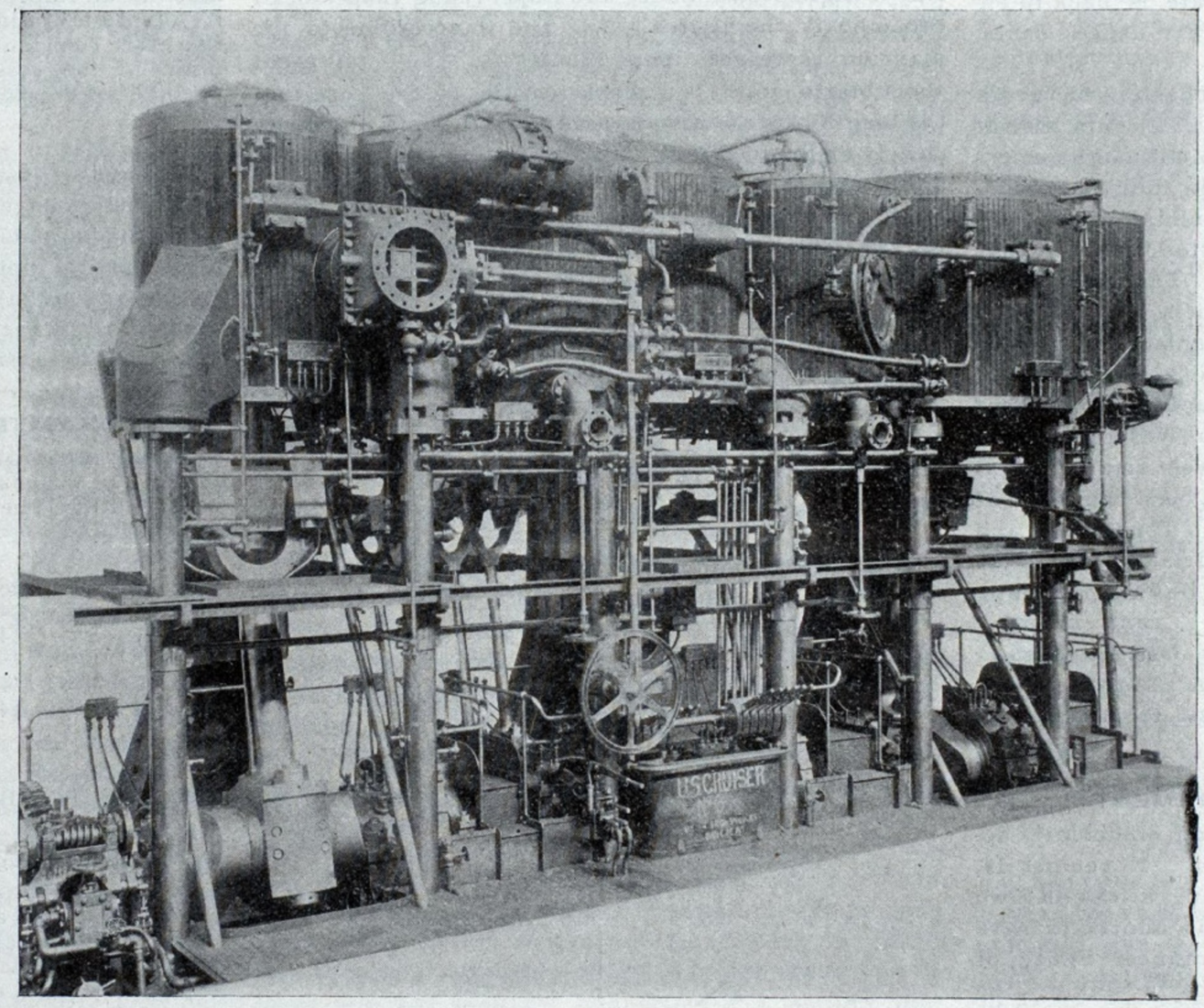
By order of the Light-House Board.

J. H. DAYTON,
Commander, U. S. N., Inspector 9th Light-House District.

ENGINES OF THE U. S. S. OLYMPIA.

(ILLUSTRATED.)

The main engines of the Olympia consist of two vertical, inverted, direct-acting, three-cylinder, triple expansion engines, side by side, with a midship water tight bulk-head between them, the engine rooms being connected at the level of the middle platform by two water-tight doors. The diameters of the cylinders are 42, 59 and 92 inches; 42-inch stroke. The valve gear is of the Stephenson type, with double bar links working the valve directly, the cut-off for full gear taking place at about .7 of the stroke. The reversing gear consists of a steam cylinder and a hydraulic controlling cylinder, the piston rods of both fitted to the cross-head, and the ends of the hydraulic cylinder connected with a by-pass worked from the stem of the steam starting valve. These valves receive their primary motion from a hand lever at the starting platform, and are stopped by a system of levers receiving motion from a pin on the reversing arm. There is also a small hydraulic pump for reversing by hand.



ENGINES OF U. S. S. "OLYMPIA."

There are two 3-bladed screw propellers, the starboard one right and the port one left handed. They are of manganese bronze, 14 feet 9 inches in diameter, adjustable pitch between 18 feet 6 inches and 19 feet 6 inches. During the trial it was 19 feet mean. The hubs are 4 feet diameter. Assistant Engineer R. E. Carney, U. S. Navy, from whose report of the contract trial to the Journal of the American Society of Naval Engineers our report is taken, states that with reference to the tabulated performances the port engine developed 254.6 H. P. more than the starboard engine, while averaging 1.45 revolutions less per minute. But a comparison of the equivalent mean pressures to develop the total horse power in the L. P. cylinders shows it to be 42.45 pounds per square inch on the starboard side, and 44.18 pounds on the port side, from which the inference would seem to be that the port propeller is coarser in pitch than the starboard one.

THE commercial possibilities of lightning are not often reckoned, but they will be discussed, it is said, in the July *Harper's Magazine* in a popular article called "The Storage Battery of the Air." The writer is Mr. Alexander McAdie, of the United States Weather Bureau at Washington.

THE FITHIAN FREE SHIP BILL.

The Republican minority of the House committee on merchant marine and fisheries has submitted to the House a report against the free ship bill introduced by Representative Fithian, of Illinois, which was recommended to the House. Representative Perkins, of Iowa, is the author of the report, and it also bears the signatures of Representatives Gillett, of Massachusetts, and Phillips, of Pennsylvania.

"The measure is more fitly entitled to designation as a bill to destroy American shipbuilding in the interests of foreign countries," says Mr. Perkins. "The report of the majority is wholly occupied in placing the worst possible estimate upon the present condition of our own merchant marine. The minority is not disposed to accept so dark a view, nor disposed to make argument wholly on the darker side. The majority confine themselves to the most discouraging view of American competitive efforts, and make this the only excuse for an abandonment of a distinctive national policy that has been undisturbed through all the successive changes of party and administration since its initiation at the very threshhold of our government. No attempt is made to establish that the passage of this bill into law would prove helpful to the government of the United States or to the shipping interests of its citizens. The proposition is for an unconditional surrender to foreign powers, both of the profits and safegards involved in the maintenance of our independence as the builder of our own ships. That the adoption of this course would prove highly satisfactory to Great Britain and other important marine powers need not be questioned; that it would prove other than a humiliation to this republic, a certain disgrace and a possible disaster, may be accepted as equally probable."

The discussion of the question, continues the report, may be carried on apart from the matter of "bounties" and "subsidies," to which the majority of the committee devote so much attention. It is improbable that a bounty system in the sense pointed out would be resorted to, and yet an American shipbuilder states that steamship owners who perform public service by transporting ocean mails undoubtedly expect pay for it, and there is no reason why this country may not pay for this service as well as countries with which it is chiefly in competition.

During the year 1893, England, France, Germany, Russia and Italy paid, roughly, $16,657,865 for transportation of mails by sea. England is acknowledged to have been so entirely successful in its maritime policy that it is now urged as useless for the United States to stand out longer against the complete domination by England of the shipping of this country. The questionis asked whether, if we are to depend upon foreign ships because they are cheaper, foreign countries should have been depended upon for the new navy and an inferior line secured, and thus retarded the development of establishments which are now able to propose to the British Admiralty for the contracts.

It is said to be settled that the United States can build as good ships as any country, and build them cheaper than any country save England. But for the law of 1872 this country could not have dreamed of competing with England for the building of her own ships. There is said to be less reason now for assaulting our navigation laws than at any time since the war, particularly since the field of profitable employment is now greatly reduced. The first cost of the ship is said not to be the controlling consideration, but its profitable employment. So long as foreigners protect themselves the carrying trade cannot be taken away by the expedient of free ships. It would be folly to abandon building iron ships when the work has just commenced. That the wages of American seamen are 30 per cent. higher than those paid abroad, is said to explain why so many foreigners ship with us. It is not so desirable to have the cheapest ships as the best ships. The extension of free registry to vessels engaged in coastwise trade is held to be the natural sequence of the proposed system. In conclusion, it is noticed that no appeal has come from shipping interests to Congress for the change.

Wreckers have stripped the hull of the schooner M. J. Cummings, lost off Milwaukee, taking away spars, rigging, and general outfit, and all that remains in sight are a few timbers awash in smooth water.

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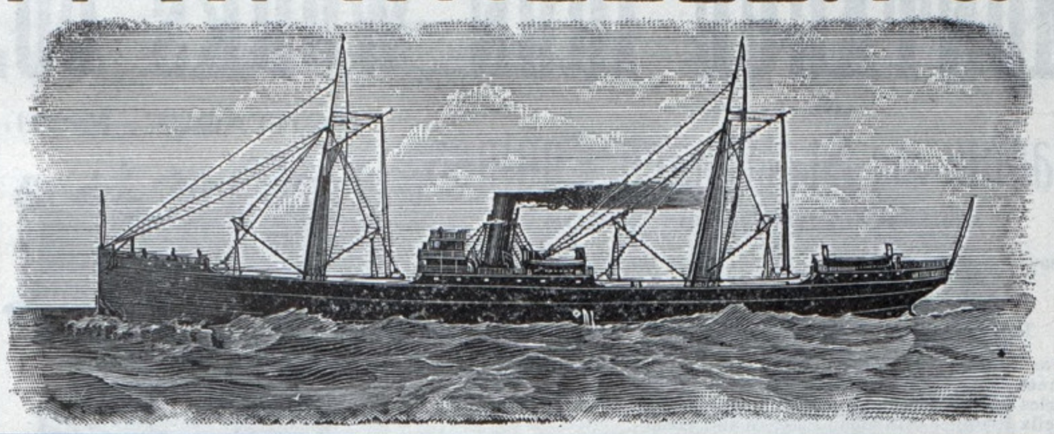

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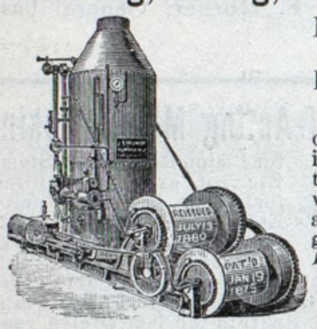

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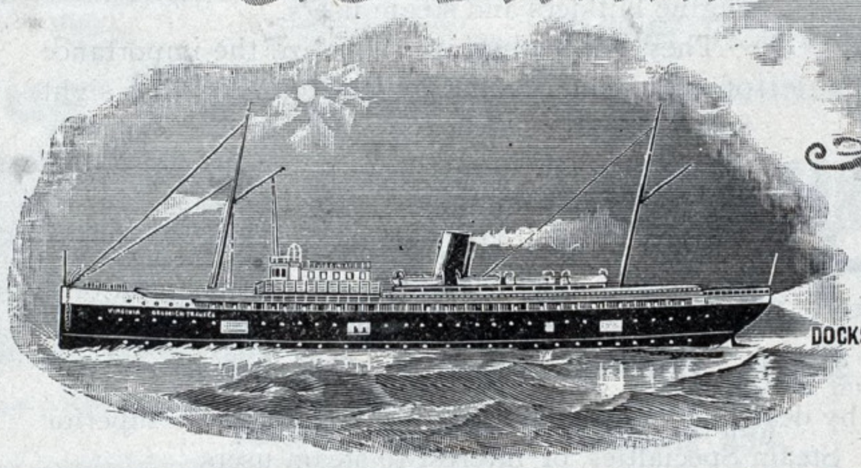

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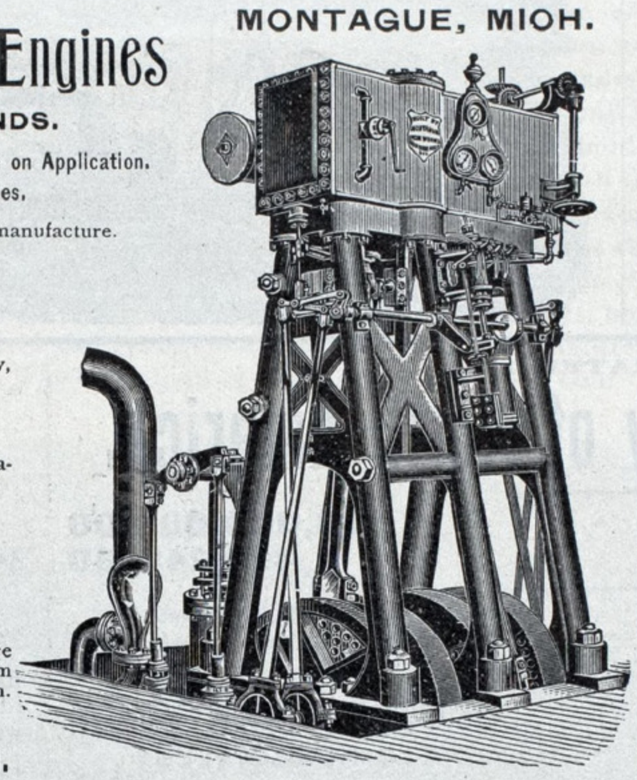

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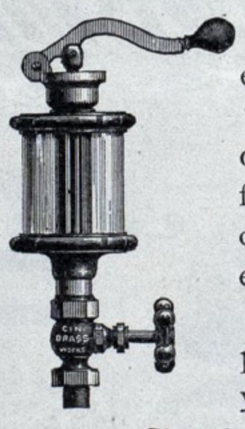

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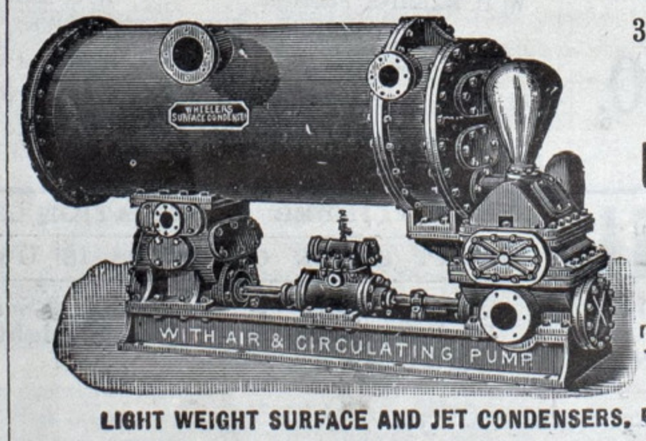

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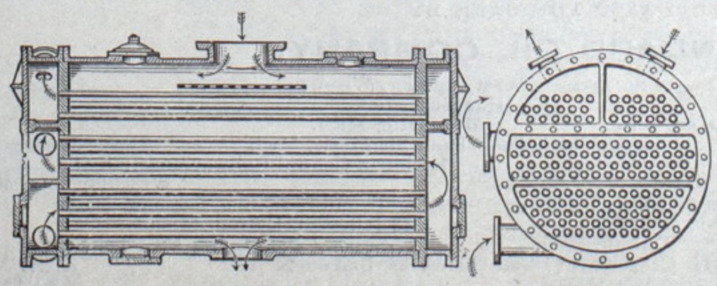

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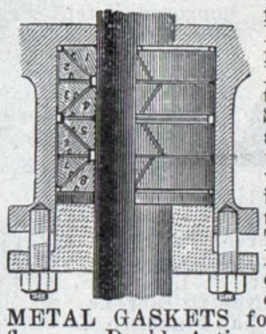

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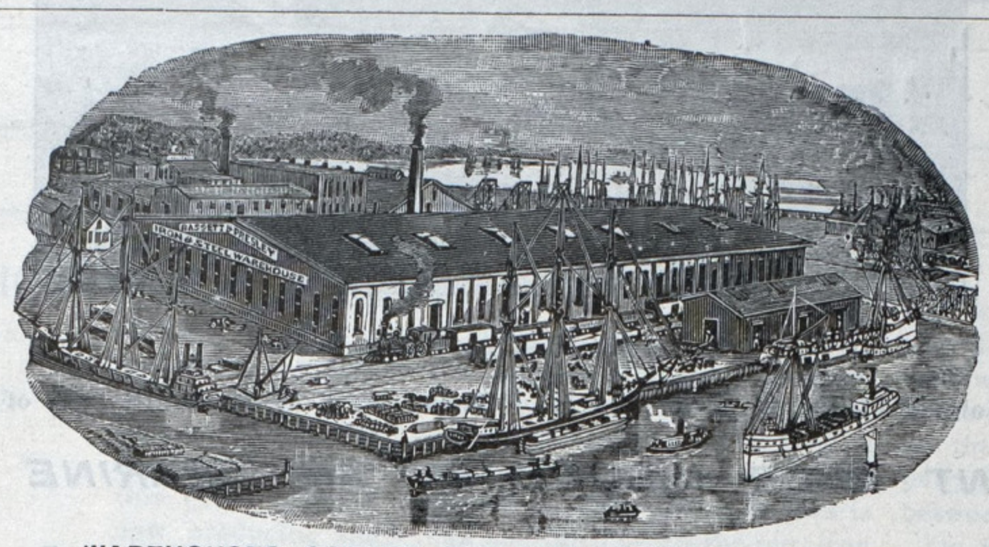

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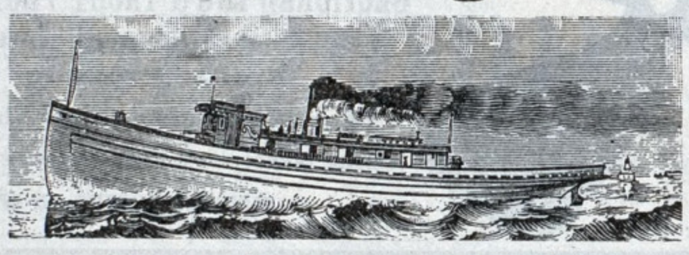

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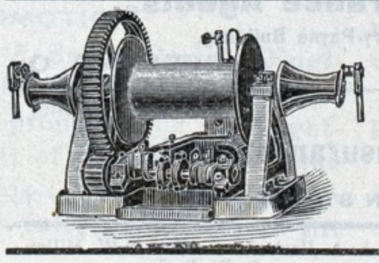

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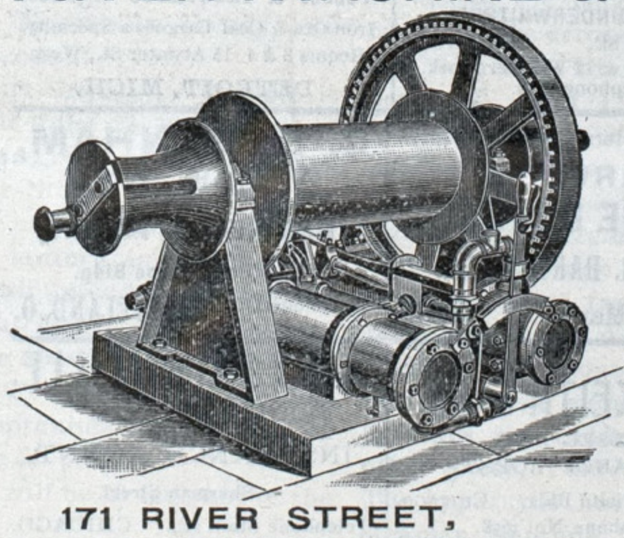

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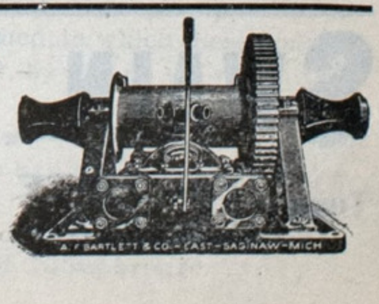

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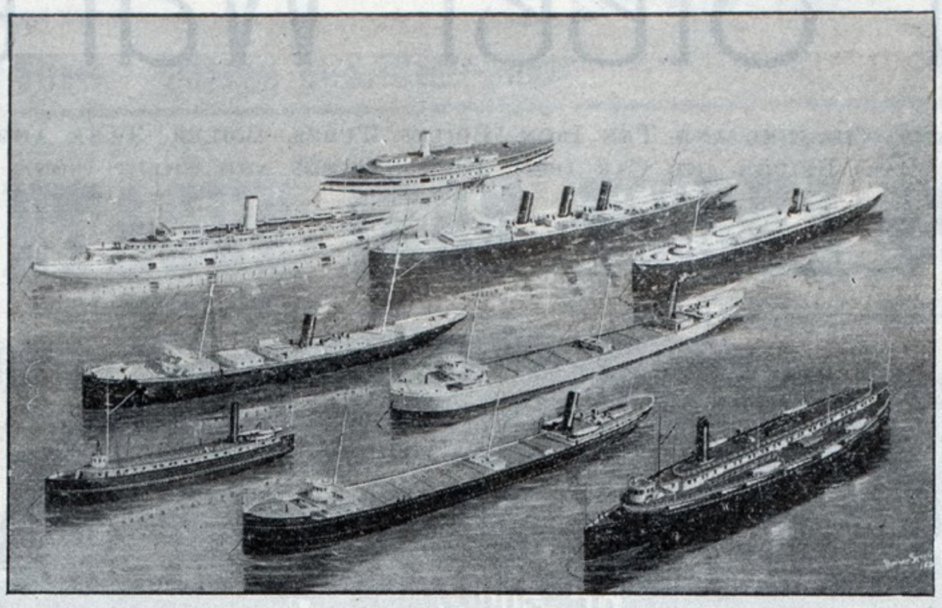

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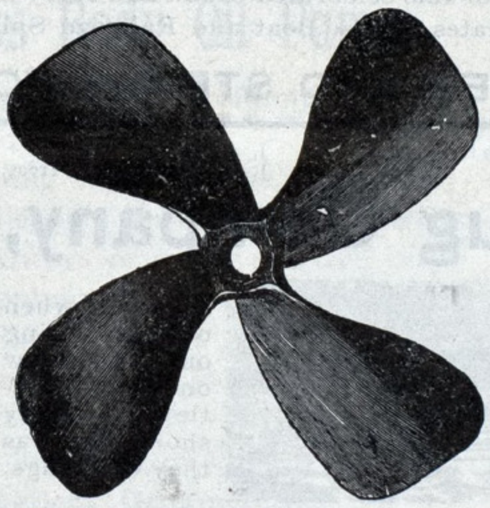

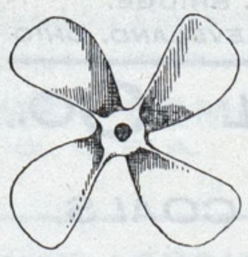

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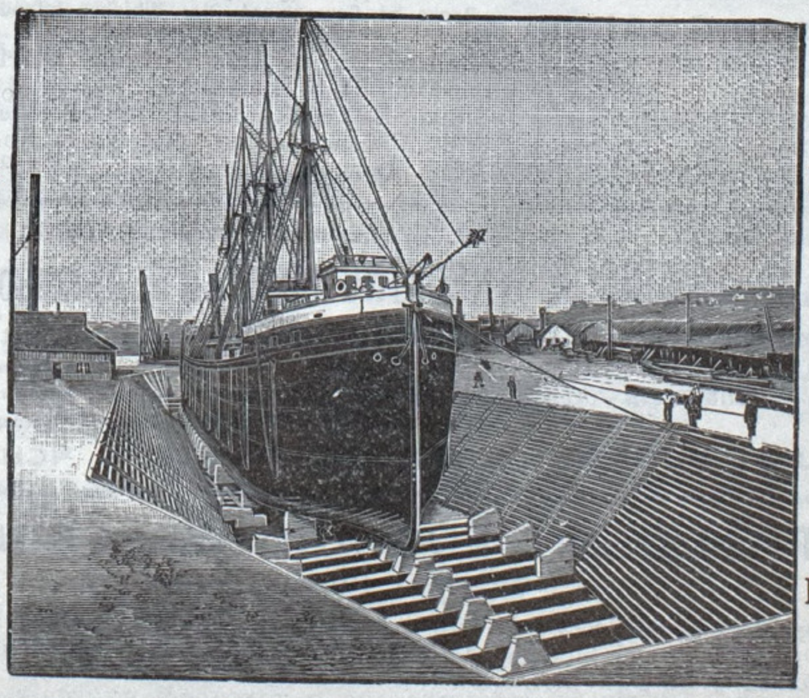

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